BENNINGTON, PATRICK M., Ph.D. An Analysis of Instrumental Music Educators' Use and Knowledge of Culturally Responsive Teaching Behaviors in Middle and High School Instrumental Music Classrooms. (2021)
Directed by Dr. Patricia Sink. 121 pp.

The primary purposes of the study were to determine the extent to which secondary school instrumental music educators consistently use culturally responsive teaching approaches and concepts in their daily classes, and to determine their level of knowledge regarding culturally responsive teaching approaches and concepts. Specifically, the study was designed to investigate the effects of the three independent variables of United States geographic location, grade-level taught, and instrumental music ensemble taught on instrumental music educators' use and knowledge of culturally responsive teaching behaviors, as measured by the *Survey of Culturally Responsive Teaching* (SCRT). Geographic location was assigned according to the state in which each participant grew up. Grade level taught was classified as middle school and high school. Instrumental music ensemble taught was classified as band and orchestra.

A sample of 10,864 instrumental music educators who were members of the National Association for Music Education was selected randomly as participants and were administered the SCRT. The sample was selected based on the need to have representation from each United States geographic location, middle- and high-school teaching, and band and orchestra teaching. Participants were assigned to geographic-location groups based on the state in which they grew up, the grade level of students that they taught, and the instrumental music ensemble type that they taught. One hundred seventy (n = 170) participants responded to the SCRT.

Results revealed that approximately 57% of participants consistently used culturally responsive teaching behaviors in their daily lessons, and approximately 71% of participants were knowledgeable of culturally responsive teaching approaches and concepts. Additionally, data analyses revealed that no significant effect of geographic location on items related to the ways in which instrumental music educators used culturally responsive teaching approaches ($p > .05$). Items designed to measure the extent to which participants were knowledgeable about culturally responsive teaching also were not significantly affected by geographic location ($p > .05$). Participants' responses to a statement indicating the extent to which they understood the concept of multicultural education, however, were significantly affected by geographic location ($p < .05$). No significant effect of grade level or ensemble type on SCRT responses existed ($p > .05$). Findings revealed that across the United States, instrumental music educators received appropriate and consistent professional development training regarding the use of culturally responsive teaching approaches, though that knowledge was not always applied in instrumental music classrooms.

Approximately 41% of the participants indicated that they understood culturally responsive teaching, but they did not know how to incorporate it in their teaching. This finding was consistent with previous research studies. Results of the current study supported the premise that U.S. instrumental music educators possibly received preparation related to culturally responsive teaching approaches and concepts, but instrumental music educators' implementation of culturally responsive teaching perhaps was deficient, and they needed additional training and supervision.

AN ANALYSIS OF INSTRUMENTAL MUSIC EDUCATORS' USE AND KNOWLEDGE OF CULTURALLY RESPONSIVE TEACHING BEHAVIORS IN MIDDLE AND HIGH SCHOOL INSTRUMENTAL MUSIC CLASSROOMS

by

Patrick M. Bennington

A Dissertation Submitted to
the Faculty of The Graduate School at
The University of North Carolina at Greensboro
in Partial Fulfillment
of the Requirements for the Degree
Doctor of Philosophy

Greensboro
2021

Approved by

Patricia E. Sink
Committee Chair

To Grace, for your sacrifice

APPROVAL PAGE

This dissertation, written by Patrick M. Bennington, has been approved by the following committee of the Faculty of The Graduate School at The University of North Carolina at Greensboro.

Committee Chair Patricia E. Sink

Committee Members Constance McKoy

Devdass Sunnassee

Jennifer S. Walter

February 15, 2021
Date of Acceptance by Committee

February 15, 2021
Date of Final Oral Examination

ACKNOWLEDGMENTS

Several people have provided me with assistance, support, and encouragement as I navigated the dissertation process. First, I would like to thank my dissertation chair, Dr. Patricia Sink for her guidance, not only in the dissertation process, but throughout my work as both a master's and a doctoral student. Second, many thanks to the remaining dissertation committee members, Dr. Constance McKoy, Dr. Jennifer Walter, and Dr. Devdass Sunnassee. Your advice directed toward improving my research always was welcomed and valued.

I would like to acknowledge my dear friends and colleagues at Western Middle School, where I spent many hours working and discussing the dissertation. They were always willing to help when needed, whether the help came in the form of covering my classes so that I could meet deadlines, or in the form of simply listening to my thoughts.

Finally, I could not have completed this dissertation without my family's support. This journey has been difficult on me, but perhaps most difficult on my family. Their sacrifices have been many. My long hours and days away from my family while I worked were challenging, but they never left my side. For that, I am thankful beyond words.

TABLE OF CONTENTS

Page

LIST OF TABLES

Page

LIST OF FIGURES

Page

CHAPTER I

INTRODUCTION

Introduction of the Problem

When students enroll in music classes, they possess prior musical knowledge, even if that knowledge develops solely from exposure to different sounds. At an early age, children can distinguish rhythmic and tonal patterns, as well as musical phrases, that are learned by listening to sounds occurring around them (Runfalo, Etopio, Hamlen, & Rozendal, 2012). Children also engage in culture-based musical activities that help express their innate musical natures (Neely, 2001). Activating prior musical knowledge and experiences may be beneficial to helping students understand musical concepts, while suppressing students' cultures may hamper their musical growth by ignoring that which children have already learned. In part, the current study is designed to investigate whether instrumental music educators are responsive to their students' culturally based musical knowledge and experiences.

Instrumental music classes in public schools often favor maintaining the tradition of Western classical instruments while excluding instruments that may be more suited to a student's culture, such as guitars or piano. Many students wish schools offered instruction in instruments other than Western classical instruments (Campbell, Connell, & Beegle, 2007). Some schools have embraced teaching instrument performance commonly associated with popular music (Allsup, 2011), that for some students is

more closely aligned to their cultures than are Western classical instruments. Teaching instruments associated with popular music is one way to provide instruction that is reflective of student culture, but also applying culturally responsive teaching concepts to existing instruction can be effective. The current study is designed to investigate the extent to which instrumental music educators adjust their teaching methods to accommodate the cultural differences among students in their classes. In other words, the current study is designed to determine the extent to which instrumental music educators in the United States use and are knowledgeable of culturally responsive teaching in instrumental music classrooms.

Background of the Study

Culture is a distinct consolidation of traits stemming from life experiences. Each event in a person's life, such as religious practices, familial expectations and rituals, and social activities, coalesce to produce an individual's culture. The ways in which people celebrate holidays, engage in musical activities, or interact with friends contributes to their cultures. Because no two people have the exact same life experiences, each person's culture is unique. Culture, however, does not exist in isolation. Though an individual's specific culture is unique, it is developed through shared experiences with others. Barrett (1984) maintains that culture is the body of learned beliefs, traditions, and behavioral guidelines that are shared among members of human society.

Of particular importance within culturally responsive instrumental music education is that cultures are learned and shared. Because culture is learned, to function in music learning environments using most traditional Western music, students must

unlearn the experiences contributing to their cultures, creating learning difficulties. Human beings often resist change because unlearning beliefs, attitudes, and values is uncomfortable and provokes anxiety (Schein, 1999). Because cultural experiences are shared, and because individual cultures are unique at a primal level, people who exist in similar social groups share cultural traits from the beginning of life. Learned and shared experiences have remarkable implications for educational practice.

When parents enroll their children in schools, they do not enroll only certain characteristics of their children. Parents do not choose the best qualities of their children, while leaving behind less desirable features. Parents enroll the whole child, including every facet of culture experienced by their children. The American public school system, however, has been reluctant to embrace the whole child from a culturally responsive viewpoint. Instead, American public schools historically have attempted to mold students into a product of the dominant culture, a process known as assimilation. Taft (1953) provides a description of assimilation that is still relevant today.

> A literal interpretation of the concept of assimilation means *a process of becoming alike*, an interpretation that in itself does not betray value assumptions. However, as applied to social groups, the term *assimilation*, often implies a positive evaluation of the values of the majority group, and a negative one of the values of the minority group. I shall ascribe the name "monistic" to this approach of assimilation. According to this viewpoint, assimilation is conceived as a "swallowing-up" of the minority group so that it loses all identity by taking over the standards and values of the latter. (p. 45)

Taft's description connotes *assimilation* as a negative action, one in which the dominant culture is boosted through reducing or eliminating the minority culture.

Cultural assimilation as an educational goal continued in the 1970s (Lampe, 1976). While some reform during the 1960s and 1970s was made to increase the amount of multicultural education in schools, such as ethnic studies and bilingual education, multicultural education remained largely on the curriculum periphery (Banks, 1979). The early part of the 1980s continued to propagate the idea that assimilation was the best practice for schools. Ladson-Billings (1995a) suggested that the goal of education in the 1980s was how to fit students who were deemed "other" in terms of race or ethnicity, into a hierarchical structure defined as a meritocracy.

To counter the idea of assimilation, educational researchers during the 1980s began to investigate ways in which marginalized students, namely African American students, may succeed academically by using students' cultures to inform teaching approaches. Research related to the connectedness of student cultures and schooling began to appear in the 1980s (Ladson-Billings, 1992). The terms, *culturally appropriate, culturally congruent,* and *culturally responsive* sought to address the ways in which educators coupled culture with lesson planning. These labels, however, merely perpetuated the notion of assimilation. Ladson-Billings (1995a) explains that these terms seemed to describe an assimilation of student culture with mainstream culture. Fitting marginalized students' cultures within a paradigm of mainstream culture continues their suppression, and does not allow students to use their prior knowledge to aid in learning.

Culturally responsive, however, is a descriptor that emphasizes maintaining a student's culture while attending public schools, and refers to a synergistic relationship between students' home cultures and their school cultures (Ladson-Billings, 1995a).

Culturally responsive pedagogy, therefore, is an approach to teaching that does not seek to minimize students' cultures. *Culturally responsive pedagogy* affirms students through three criteria: (1) students must be academically successful, (2) students must maintain cultural competence, and (3) students must develop the tools needed to challenge the main culture's status quo (Ladson-Billings, 1995b).

Villegas and Lucas (2002) explain that culturally responsive educators respond as follows.

- Have sociocultural consciousness.
- Have affirming views of students from diverse backgrounds.
- Have a sense that they are both responsible for and capable of bringing about educational change for students with diverse backgrounds.
- Embrace constructivist views of teaching and learning.
- Are familiar with their students' prior knowledge and beliefs derived from both personal and cultural experiences.
- Design instruction that builds on what students already know while stretching them beyond the familiar.

The above description supports the premise that through a culturally responsive approach to education, racially and ethnically marginalized students may be more successful than through an assimilationist approach. Within culturally responsive teaching methodologies, educators use students' prior knowledge as they teach— a natural occurrence for students of the dominant culture. An assimilationist teaching approach does not adhere to the above descriptors of culturally responsive teaching. Instead, the

assimilationist approach reflects the desire for involvement solely with members of only one cultural group (Hamm & Coleman, 2001).

Need for the Study

The field of Music Education has a history of applying multicultural characteristics within instruction and lessons (Abril, 2010), although not equally between elementary and secondary schools. When public school music education experiences are divided into grade levels, disparities in the amount of culture-specific lesson planning exist. Elementary general music educators typically assume the responsibility of providing the greatest amount of district-mandated multicultural music education (Sheehan, 2002). Instrumental music classes in public secondary schools often focus on developing discipline-specific performance techniques and notational literacy (Sheehan, 2002). Instrumental music lessons, in which ensemble musical performance is the primary goal, tend to include multicultural music as a means of increasing ensemble performance standards, rather than as a means of studying or applying a particular culture's music. The current study is designed to investigate the extent to which culturally responsive music teaching approaches occur in instrumental music classes within the United States.

The lack of substantial study of multicultural music in instrumental music ensembles is possibly due to several factors. First, the traditional nature of elementary and secondary schools' instrumental ensembles maintain the status quo by performing a specific type of repertoire, upholding the decades-long notion that wind bands perform wind band music and orchestras perform orchestral music. These historical traditions tend

to prevent growth and change (Allsup & Benedict, 2008)—a concept necessary to understand if culturally responsive teaching concepts are to be implemented into daily instrumental ensemble classes. Mantie (2012) describes music education as a struggle between two types of music education paradigms, that of musical development in a general sense, and a perpetuation of a specific musical tradition (i.e., Western classical). Mantie (2012) suggests the following.

> The distinction between the two can be thought of as the difference between understanding "music education" as meaning the development of individual and collective character and dispositions of a global, universal, or non-situated nature—a general way of being, particularly being in and through music, in the world—and the primary point of music education as inducting people into specific (usually Western classical) musical traditions, something that ensures their perpetuation as musical traditions. (p. 68)

Clearly, disagreement exists between the notion that music education should be a way of knowing music as a means of self-exploration, or that music education provides a means of maintaining a performance tradition infused with the dominant culture.

Second, instrumental music educators may not receive adequate preparation on applying multicultural music concepts, and by extension, may not receive preparation on culturally responsive musical concepts and approaches. Multicultural teaching tends to be content oriented, and generally focuses on specific cultures. Conversely, culturally responsive teaching includes considerations of content, but is primarily focused on how culture impacts learning. Volk (1991) maintains that while instrumental music educators tend to view multicultural musical practices positively, they are often unsure of how to implement them in their teaching. Based on a study by McClellan (2002), instrumental

music educators tend to have positive opinions about multicultural music as a concept but express neutral opinions when asked about implementation. If instrumental music educators are unsure of how to incorporate multicultural music concepts into their classes, implementing culturally responsive teaching concepts may be difficult and perhaps avoided by the educators.

McKoy, Macleod, Walter, and Nolker (2017) investigated the impact of a workshop related to culturally responsive teaching on music teacher perceptions of culturally responsive teaching. Based on the study results, the researchers maintain that many educators who participated in the workshop had some previous knowledge of culturally responsive teaching, as well as a desire to learn about culturally responsive teaching. Completing the workshop provided knowledge and skills that the participants needed to become culturally responsive educators. Volk (1991) and McClellan (2002) have found similar results, instrumental music educators seem to view culturally responsive teaching concepts favorably. Unfortunately, a lack of effective professional development may prohibit them from fully implementing culturally responsive teaching concepts in their classrooms.

Geographic location may influence the prevalence of culturally responsive teaching usage. Ramsey, Williams, and Vold (2002) explain that some involuntarily marginalized children view schools as another form of subjugation. ‘Involuntarily marginalized children’ are children or their ancestors who did not arrive to the United States through immigration. Those children view schools as a way to keep them oppressed. Fordham (1988) describes how African American students often have

difficulty maintaining their connections with their communities and succeeding in school. Their cultures are being suppressed. African American students and other involuntarily marginalized children are forced to assimilate into a way of life that may not be representative of their own. Fordham (1988) further explains that some African American students either deny their race to academically succeed, or they hide their success from peer groups.

The concept of culturally responsive teaching provides a way to combat students having to disregard their cultures to attend school. Are educators in regions of the United States with higher populations of African American students already using culturally responsive teaching approaches effectively? Is the concept of culturally responsive teaching being encouraged in these regions through the prevalence of professional development related to culturally responsive teaching? One area on which the current study focuses is determining if there is an effect of geographic location in the United States on instrumental music educators' usage of culturally responsive teaching.

A difference in the amount of culturally responsive teaching approaches used in instrumental music classrooms may exist between instrumental music educators teaching in middle schools and high schools. The review of literature for the current study showed no evidence of the number of instrumental music educators who included culturally responsive teaching approaches in their music instruction and lessons. High school instrumental ensembles often focus strictly on performance preparation, such as yearly concerts, marching band festivals, and adjudicated festivals, often to the detriment of a comprehensive music education (Allsup & Benedict, 2008; Russell, 2006). If an

instrumental music educator's primary goal for daily lessons is preparing for performances, culturally responsive teaching may not be occurring. Also, many high school instrumental ensembles perform publicly with more frequency than middle school instrumental ensembles. Perhaps middle school instrumental music educators feel that they have time to devote to comprehensive music instruction since they may have fewer performances than some high school instrumental music educators. The current study also focused on the effect of grade level taught on frequency of culturally responsive teaching approaches used.

Implementation of the current study was necessary to determine the extent to which public school instrumental music educators used culturally responsive teaching approaches in their daily lessons. If an increase in music educator preparation is necessary to encourage instrumental music educators to employ culturally responsive approaches in their music instruction and daily lessons, data that reveals how many educators already apply these approaches is necessary. The paradigm of the modern instrumental music education needs to adapt to include all students' cultural qualities, not just students in the racial and ethnic majority. Without evidence regarding music educators' current practices regarding cultural responsiveness, however, altering the culturally dominant aspect of school instrumental music will be difficult. American public schools need research and professional development to help reform teaching practices that include students of all cultures in their musical ensembles and education. The current study is an initial step toward providing students culturally responsive music education.

Purpose of the Study

American public school instrumental music educators tend to be monocultural in their teaching methods (Kindall-Smith, McKoy, & Mills, 2011). Students' participation may be limited if they do not identify with the Western European cultural perspective, particularly since the content, historical development, and pedagogy comprising current music education practice continue to reflect this perspective (Kindall-Smith, McKoy, & Mills, 2011). Educators' instructional methods and classroom activities impact student involvement, since students from different cultural backgrounds may be uncomfortable with certain activities (Butler, Lind, & McKoy, 2007). Instrumental music educators need to alter their teaching practices to attract increased numbers of students whose cultural perspectives are outside Western European cultural norms (Kos Jr., 2018).

One important way in which instrumental music educators may recruit increased numbers of culturally marginalized students in instrumental music ensembles, and may support students' musical successes, is by incorporating culturally responsive teaching concepts. The primary purposes of the current study were to determine the extent to which secondary school instrumental music educators consistently use culturally responsive teaching approaches, and to determine their knowledge of culturally responsive teaching concepts. Specifically, the current study was designed to determine if there are statistically significant effects of: (1) geographic location in the United States (i.e., East South Central, West South Central, New England, Pacific, West North Central, East North Central, Mountain, Middle Atlantic, South Atlantic), grade level taught (i.e., middle school, high school, and middle and high school), and music ensemble taught

(i.e., band and orchestra,) on instrumental music educators' use and knowledge of culturally responsive behaviors. As related to the current study, therefore, the researcher answered the following research questions.

1. What percentage of U.S. instrumental music educators consistently use culturally responsive teaching?
2. What percentage of U.S. instrumental educators are knowledgeable of culturally responsive teaching concepts?
3. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching usage ($p \leq .05$)
4. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching knowledge ($p \leq .05$)?
5. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching usage ($p \leq .05$)?
6. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching knowledge ($p \leq .05$)?
7. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching usage ($p \leq .05$)?
8. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching knowledge ($p \leq .05$)?

Definition of Terms

The following terms and phrases are foundational to the current study. For some, clear definitions are not always available. For example, multicultural education may be described as a teacher's actions in being multicultural (Ambrosio, 2003) or as goals for student understanding (Banks, 1999). Clarification of the definitions of key terms and phrases is provided to facilitate readers' understanding of these terms and phrases throughout the dissertation.

- ***Culturally responsive teaching*** is a phrase developed by Geneva Gay, an educational researcher. She defined culturally responsive teaching as, "using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more effectively (Gay, 2002, p.106). Culturally responsive pedagogy is a phrase developed primarily by Ladson-Billings (1995a) as part of a theory designed to increase the academic success of African American students. Her definition explained that culturally responsive teaching addresses student achievement but allows for their cultures to stay intact, which is a necessary criterion for a culturally inclusive educational model. Culturally responsive teaching is not a set practice for educating students, but rather a philosophical approach that seeks to affirm and maintain students' cultures while educating them. The current research proposal will use the Geneva Gay phrase, "culturally responsive teaching."

- ***Marginalized*** refers to U.S. public school students that are part of a marginal positon within a society or group, even if the marginalized population is greater in number than the dominate population ("Marginalized," 2021). The primary use of *marginalized* in the current study was to describe students that are part of a racially or ethnically sidelined population.

- The ***majority*** population describes Caucasian people of European decent ("Caucasian," 2020).

- The phrase, ***multicultural education****,* was used to differentiate between practices related to culturally responsive teaching and multicultural education. Though there are similarities between multicultural music teaching and culturally responsive teaching, the differences are pronounced. Culturally responsive teaching is a philosophical approach implemented through educational techniques that utilize students' cultures when teaching lessons. Multicultural education, like culturally responsive teaching, is a teaching process that permeates all aspects of a student's academic experience, but does so by providing knowledge about the histories, cultures, and contributions of diverse groups (The National Association for Multicultural Education, 2020).

- ***Cross-cultural experiences*** occur when educators understand and teach in a manner that suggests familiarity with how culturally-specific knowledge affects learning (Gay, 2002).

- The phrase, ***instrumental music educators****,* describe public school band and orchestra educators.

- ***General education*** is a phrase used to differentiate school classes that are different from music classes. Examples include mathematics courses, languages, sciences, and histories.

- The term, ***consistently,*** was used in research question one as an adverb to describe the amount of culturally responsive teaching that occurred in instrumental music classrooms. The Merriam-Webster dictionary defined *consistently* as, "marked by harmony, regularity, or steady continuity" (Merriam-Webster Online Dictionary, 2020). Because the Merriam-Webster definition does not include terms such as *always,* or, *on every occasion,* some flexibility can be applied when describing culturally responsive teaching usage. For the purpose of the current study, *consistently* is defined as survey responses that include *Usually* or *Always*.

CHAPTER II

REVIEW OF LITERATURE

The purpose of the literature review was to place the current study within the context of research on culturally responsive teaching, as related to two major fields of study, including general education and music education. A discussion of the uses of culturally responsive pedagogy in music education cannot commence without an understanding of culturally responsive pedagogy in education as a whole. As such, a review and discussion of the literature involving culturally responsive pedagogy was necessary including the origin of culturally responsive pedagogy as a theory and its uses as a means to advance the educational achievement of culturally and ethnically marginalized students. The literature related to applications of culturally responsive pedagogy to music education is examined and discussed in Chapter II, including its uses in general, choral, and instrumental music courses. In this study, "general education" is defined operationally as secondary school classes associated with the sciences, histories, mathematics, and English language communication. Additionally, research on culturally responsive music education was reviewed and discussed in this chapter.

Culturally responsive pedagogy is designed to allow for various cultural differences among students while providing high quality education for all. Gay (2002) defined culturally responsive teaching as "using the cultural characteristics, experiences, and perspectives of ethnically diverse students as conduits for teaching them more

effectively" (p. 106). In other words, culturally responsive educators applied the prior experiences of students, including cultural qualities, to inform lesson planning. By doing so, educators placed students' lived experiences within a learning framework that allows them to have personally meaningful learning experiences and an increased interest in the subject matter, which is learned more easily and thoroughly (Gay, 2000).

Ladson-Billings (1995a) used similar language in her culturally responsive definition but added that while increased academic success among marginalized students was certainly a result of applying culturally responsive teaching concepts, it also helped students accept and affirm their cultural identities. Ladson-Billings (1992) explained that culturally responsive educators believe that all students can learn and that each cultural group has unique traits that should be explored and utilized.

Origins of Culturally Responsive Teaching

During the 1980s, research literature related to the connectedness of student cultures and schooling began to appear (Ladson-Billings, 1992). Culturally responsive teaching's foundation was constructed using terms such as cultural difference and cultural compatibility (Vogt, Jordan, & Tharp, 1987), though these terms are either not generalizable to a larger ethnically or racially marginalized population or they did not adequately address the academic inequities between African American students and their peers (Ladson-Billings, 1995a). Vogt, Jordan, and Tharp (1987) conducted a case study to investigate two efforts to produce school success rather than school failure, based on an assumption that specific cultural differences may be the foundation of school failure and that producing particular cultural compatibilities was a key to school success. In their

article, the authors attempted to provide a solution to the question of why schools fail. In an attempt to answer that question, the authors suggested a model of cultural difference or cultural compatibility as the solution.

Ladson-Billings had as her initial goal for cultural responsiveness, a desire to develop a theory that did not assume that the academic achievement of groups outside the dominant culture was dependent on assimilation to the dominant culture (Lind & McKoy, 2016). Ladson-Billings introduced the term, "culturally relevant," as a means to describe a manner of teaching in which the status quo is challenged so that students can critically examine educational content by using their cultures to create world meaning (Ladson-Billings, 1992). The term, *culturally responsive,* emerged later from Ladson-Billings' desire to describe a synergistic relationship between students' home and school cultures (Ladson-Billings, 1995a). Gay (2010) preferred to use *culturally responsive* as well because it represented a culmination of ideas and explanations from a variety of scholars. Since two landmark scholars on culturally responsive teaching preferred the term *culturally responsive* in their work, the same term was used throughout the remainder of this document unless quoted from another work.

Culturally Responsive Teaching in General Education

Adapting teaching practices to be culturally responsive originated from a desire to improve the academic success of African American students. Ladson-Billings (1995) explained that while the means of developing academic skills may vary, all students need instruction related to developing skills such as numeracy, language, technology, society, and politics. The second main section of the current study's literature review addressed

the manner in which culturally responsive teaching approaches are used in general education classes.

Larson, Bradshaw, Rosenberg, and Day-Vines (2018) examined the relationship between student social behaviors and the observed use of, and teacher self-reported efficacy in, using culturally responsive teaching and proactive behavior management. Participants were 274 educators teaching in 18 schools. Data were collected by teacher observation and a self-report survey. The study's results indicated a statistically significant association between observed culturally responsive teaching practices and positive student behaviors, which suggests that the use of culturally responsive teaching approaches in schools may improve student discipline.

Bonner, Warren, and Jiang (2018) conducted a qualitative study that explored the perceptions of educators in urban schools regarding teaching diverse students and their ability to effectively implement culturally responsive teaching concepts. Participants included 430 urban educators from three southern California urban school districts. Data were collected via four open-ended sentence stems. Participants provided information on their thoughts, beliefs, and experiences as related to the sentence stems. Results indicated educators' strong commitment to, and understanding of culturally responsive teaching, knowledge of approaches that constitute culturally responsive teaching, and a strong sense of efficacy regarding diverse student education.

Culturally Responsive Teaching in Classes of Ethnically and Racially Marginalized Students

While several research studies were designed to investigate culturally responsive teaching practices for all students, other studies were conducted on culturally responsive teaching approaches in classes either designed for marginalized students such as an English language learner class or classes with a high African American population. Mellom, Straubhaar, Balderas, Ariail, and Portes (2018) investigated how culturally responsive professional development training shaped teacher attitudes towards Latinx English language learners. Participants in this study included 147 third and fifth grade educators randomly divided into either a control or treatment group. Participants in the treatment group received face-to-face training using a type of culturally responsive pedagogy called the Instructional Conversation pedagogy. The control group received only the professional development offered by their schools or school districts. Results of the study indicated that cultural assumptions and prejudices had a strong influence on many educators' attitudes towards English Language Learners, but training in culturally responsive teaching can help to lessen those prejudices over time.

Corp (2017) conducted a qualitative study which examined how African American students responded to the use of culturally relevant stories during their mathematics class. Participants included seventeen African American students in two third-grade mathematics classes and their teacher. Though each class was not comprised solely of African American students, only the African American students from each class participated in the study. Each mathematics lesson consisted of three parts: (1) reading the story, (2) a mathematical discussion based on the story, and (3) time for mathematical

problem solving. Data were collected through observing and coding student behaviors during each part of the mathematics lessons. Students also shared their thoughts during weekly reflections. Several implications that affected elementary students and educators were discovered. First, nearly all students agreed that the stories helped them think about mathematics to some degree. Second, the students began to realize how mathematics affects their everyday lives. Third, the stories provided each student the same background information for solving the mathematical problems. Finally, the study could be used as a model for teaching preservice educators methods for using multicultural stories to provide context while being culturally responsive to a diverse classroom.

Culturally Responsive Teaching with Exceptional Children

Researchers investigated the effects and usage of culturally responsive teaching approaches with students classified as exceptional. Exceptional children include students with mental, physical, behavioral, and learning disabilities, as well as academically gifted children. Chiu, Carrero, and Lusk (2017) presented strategies for including culturally responsive teaching concepts into scaffolded writing instruction for students with emotional and behavioral disorders (EBD). The authors described a novice special education teacher, Ms. Bullock and her attempts to improve the writing skills of her students with EBD. Vignettes of Ms. Bullock's teaching provided the stimulus for suggestions regarding ways in which culturally responsive teaching can assist students with EBD. Results of the study indicated that using culturally responsive instruction can limit frustration caused by academic deficits among students with EBD.

Orosco and O'Connor (2014) investigated the culturally responsive instruction of one special education teacher with Latinx English language learners with learning disabilities in an urban elementary setting. This case study focused on how one teacher's culturally responsive teaching knowledge affected her exceptional children instruction. Results of the study indicated that English language learner special education success at the elementary school level may be dependent on the manner in which the teacher incorporates culturally responsive instruction.

Perceptions of Culturally Responsive Teaching

Barnes and McCallops (2019) investigated educators' beliefs, perceptions, and application of culturally responsive teaching approaches while implementing a social-emotional learning intervention. Participants included seven educators who taught pre-kindergarten through fifth grade students in a private school. They attended two focus group sessions designed to allow participants to share their teaching experiences. Results of the study revealed that participants desired school-wide goals that lead to cultural responsiveness. Participants also explained that they need school-wide support and preparation on using culturally responsive approaches in their classrooms.

Lambeth and Smith (2016) explored pre-service educators' perceptions of teaching in a culturally responsive classroom. Participants included 21 graduate pre-service educators enrolled in two cohorts of the Master of Teaching program. Findings of the study revealed that pre-service educators believed that an education program should teach future educators about how to work with culturally diverse students and not that they should just accept students' differences. One participant remarked that "everyone

has said that a teacher must be culturally responsive, but no one has ever shown how" (p.51). Other participants further explained that they believed that they should practice becoming culturally responsive educators, but had limited knowledge of the concepts.

Frequency of Culturally Responsive Teaching Approaches

Few general education studies were designed to examine the frequency of educators using culturally responsive teaching approaches. Siwatu (2009) examined student educators' self-efficacy beliefs regarding culturally responsive teaching and the regularity in which they used them in their classes. Participants were student educators (*n* = 50) enrolled in a teacher education program. Art, music, agriculture, and physical education educators were not included in this study. The *Implementation of Culturally Responsive Teaching Practices Scale* was administered to determine the frequency in which participants applied culturally responsive teaching approaches in their lessons. Results indicated that student educators that believed they could implement culturally responsive concepts did so more than student educators lacking that belief. The culturally responsive approaches observed most frequently aligned with many educators' general teaching practices. Several limitations related to the proposed study are evident in Siwatu's (2009) work. An attempt was made to determine the frequency in which culturally responsive teaching approaches were recognized. However, student educators were used, therefore the results cannot generalize to in-service educators. The omission of music educators as participants also indicates the need for the current study.

Culturally Responsive Adult Education

Rhodes (2013) examined the culturally responsive teaching practices among educators of adult English for Speakers of Other Languages (ESOL) and English for Academic Purposes (EAP) students. Participants of the study included 134 Florida educators in non-credit, adult education ESOL and EAP programs. The survey developed for the Rhodes study examined the most and least evident culturally responsive teaching practices. The purpose of the study was to add to the body of culturally responsive teaching knowledge by describing teaching practices in linguistically and ethnically heterogeneous environments of adult ESOL and EAP classrooms.

Sealey-Ruiz (2007) conducted a qualitative study that examined how adult African American women responded to a culturally responsive curriculum. Participants were fifteen adult African American female students in a collegiate freshman writing composition class. Results of the study indicated that integrating students' life experiences in the class curriculum encouraged them to participate fully in their own education.

Culturally Responsive Music Education

Though perhaps not explicitly, several studies examined ways in which music educators can be culturally responsive. Colley, in a 2008 study on culture and school music ensembles, sought to discover individual cases of alternative, or non-western classical musical instruments being used in school music programs. Through this case study, she found that four participants—school music ensemble educators—addressed issues of cultural relevance by providing a nontraditional approach to school music

instruction. Though the manner in which these educators taught music was certainly culturally responsive, Colley (2008) found that they may not be motivated to be culturally responsive, or even aware that their teaching methods are culturally responsive. Conversations with the participants indicated that they do not seem to be very interested in the scholarly approach to cultural responsiveness, rather they simply taught in a manner that addressed the needs of all students (Colley, 2008).

Teaching in a culturally responsive manner is an achievement regardless of the manner in which the teacher becomes culturally responsive. The participants in Colley's (2008) case study applied culturally responsive teaching concepts because they inherently believed that it was the best way to educate all students. They did not begin their teaching careers as one type of teacher, only to adapt to being a culturally responsive teacher later. Do most music educators use culturally responsive teaching approaches with their classes as did Colley's participants? Do they teach in a different manner which necessitates a retraining of ideas, a modification of beliefs? Until these questions can be answered, the music education profession cannot adapt to one that is inclusive of all students, one that allows for recognition of culture as a means of educating every student.

The aim of the current study was to begin answering these questions so that instrumental music education may reach levels of cultural responsiveness on par with other types of music instruction, namely elementary general music. Researchers examined the application of culturally responsive teaching concepts in general music classes (Abril, 2013; Kelly-McHale, 2013; Thibeault, 2013; Walter, 2018) and choral music classes (Shaw, 2012; Bond, 2014;), but few studies were conducted related to

culturally responsive music ensemble instruction, and none to discover the extent to which music ensemble educators used culturally responsive instructional methods.

Lind and McKoy's (2016) text on culturally responsive music teaching included a discussion on the merits of music teacher adaptation to cultural responsiveness. While their suggestions are valuable, they did not address the question of the specific number of music educators that consistently apply culturally responsive teaching approaches in their lessons. There is an assumption, and perhaps rightfully so, that music educators largely ignore culturally responsive teaching in favor of traditional methods, thus necessitating a change in approach. Kindall-Smith, McKoy, and Mills (2011) explored ways in which culturally responsive teaching can counter the traditional nature of music teaching by rectifying the omission of significant voices in music education through music teacher preparation. The number of music educators that require preparation on culturally responsive teaching is unclear. The current research study will attempt to discover how many instrumental music educators incorporate culturally responsive teaching approaches in their daily lessons.

Clearly, the literature related to culturally responsive education includes several examples of ways in which culturally responsive teaching concepts can be implemented in all types of classrooms, including music classrooms. This type of research is needed as public schools enroll an increasingly diverse student population. However, from a professional development perspective, enacting comprehensive skill development with the intent of altering the teaching practices of all educators may prove difficult without data related to who actually uses culturally responsive teaching approaches in their

classrooms. School districts with money allocated for music educator professional development may contemplate funding a professional development session on culturally responsive music teaching. With data related to the number of music educators incorporating culturally responsive teaching approaches in their lessons, school administrators would have evidence for the need for culturally responsive teaching preparation, should it prove necessary. The current study sought to provide data on the percentage of American secondary school instrumental music ensemble educators that consistently use culturally responsive teaching approaches in their daily lessons.

Culturally Responsive Music Ensemble Teaching

Schmidt and Smith (2016) conducted a qualitative study that examined the ways in which a first-year music teacher (Michael) attempted to integrate culturally responsive instruction in the context of a beginning strings instrument class. Michael's goal for his beginning strings class was to promote student musical interests within the skill limitations of beginning instrumentalists. The researchers identified institutional structures that supported and hindered Michael's goals, as well as the approaches Michael took to manage obstacles to implementing his instruction. While this article demonstrated ways in which instrumental music educators can implement culturally responsive teaching approaches, it only included one participant, which makes generalizing difficult.

Mixon (2009) addressed ways in which ensemble music educators can be culturally responsive through modifications to traditional ensembles, tapping into multiple cultural sources, adding or increasing the number of alternative ensembles in

schools, and programming and performance flexibility. While suggestions for improving the cultural responsiveness of instrumental music educators were provided, no evidence of the number of educators currently applying culturally responsive approaches in their teaching were indicated, as the current study examined.

Escalante (2019) provided a literature review as a method to examine the manner in which Latinx students participated in music offerings within secondary schools. Findings of this literature review revealed that Latinx students are underrepresented in secondary school music courses when compared to their percentage of the overall school population. Applying culturally responsive teaching approaches to the planning of school music curriculum may attract increased numbers of Latinx students, whether through increased variety of instrumental ensembles offered in the school, or a relaxation of prerequisites for entry into some music classes.

Abril (2010) described the manner in which a music teacher created a mariachi band in an effort to respond to the growing number of Hispanic students in a suburban middle school. The purpose in Abril's description of the participant's mariachi experience was not to provide instruction on teaching mariachi, but rather to give voice to students whose diverse backgrounds offer music educators a viewpoint on which to examine their own teaching practices.

Perceptions of Culturally Responsive Music Teaching

Shaw (2016) designed a case study that involved a Puerto Rican choir from an urban nonprofit children's choir organization. The purpose of the study was to investigate adolescent choral students' perceptions of culturally responsive pedagogy. The

multiethnic choir teacher designed instruction that was responsive to a significant migrant and Hispanic student population. Results of the case study indicated that the choir students perceived their teacher's teaching approaches as honoring their own cultural backgrounds as well as expanding their cultural and intellectual horizons. Although the students' perceived their teacher's instruction positively, they identified potential barriers such as the challenges of meeting the needs of a diverse student population, and the time restraints of a typical choir rehearsal.

Salvador and Kelly-McHale (2017) investigated music teacher perspectives on social justice, a key disposition that culturally responsive educators possess (Whitaker & Valtierra, 2018). A survey was administered to 858 collegiate music education instructors. Of the 858 initial educators, 356 completed and returned the survey. The survey included open-ended questions which asked participants to define social justice, as well as items that addressed social justice topics in teaching practices. Findings of the survey indicated that many of the participants reported they felt like they were engaged in, and addressed, social justice topics in their classrooms. However, about 50% of the participants defined social justice as being colorblind to students' racial features, which, according to the researchers, perpetuated the dominant racial group's importance. Approximately ten to fifteen percent of participants felt that addressing social justice topics was not part of their jobs, and another ten to fifteen percent of participants indicated a need to learn more on how to address social justice issues in their classes.

Bond and Russell (2019) investigated music teacher educator perceptions of, and engagement with, culturally responsive teaching. A secondary purpose of the study was

to describe music teacher educator comfort with, and usage frequency, of strategies aimed at developing the dispositions and knowledge needed to become a culturally responsive educator. A survey was administered to 1,499 music teacher educators, with 228 responses. Findings indicated that music teacher educators were familiar with the definition of cultural responsiveness and viewed general aspects of culturally responsive teaching as most important. Items related to decreasing the divide between home and school were viewed as least important. Music teacher educators were most comfortable with the basic elements of culturally responsive teaching. Furthermore, their perspectives related to culturally responsive teaching's importance seem to be based on a peripheral engagement, rather than a deep study of culturally responsive teaching.

Restatement of the Purpose of the Study

The primary purposes of the current study were to determine the extent to which secondary school instrumental music educators use culturally responsive teaching approaches, and to determine instrumental music educators' level of knowledge of culturally responsive teaching concepts. A secondary purpose was to determine whether there were significant differences ($p \leq .05$) in culturally responsive teaching usage and knowledge among instrumental music educators based on their geographic location, the grade level they teach (middle or high school), and ensemble type they teach (band or orchestra). As related to the current study, therefore, the researcher investigated answers to the following research questions.

1. What percentage of U.S. band and orchestra educators consistently use culturally responsive teaching?

2. What percentage of U.S. band and orchestra educators are knowledgeable of culturally responsive teaching concepts?

3. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching usage ($p \leq .05$)?

4. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching knowledge ($p \leq .05$)?

5. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching usage ($p \leq .05$)?

6. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching knowledge ($p \leq .05$)?

7. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching usage ($p \leq .05$)?

8. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching knowledge ($p \leq .05$)?

CHAPTER III

PROCEDURES

The purpose of the current study was to determine the extent to which secondary school instrumental music educators use culturally responsive teaching approaches and to determine their level of knowledge regarding culturally responsive teaching concepts. A secondary purpose was to determine whether there are significant differences in culturally responsive teaching usage and knowledge among instrumental music educators based on their geographic location, the grade level they teach (middle or high school), and ensemble type they teach (band or orchestra). As related to the current study, therefore, the researcher investigated answers to the following research questions.

1. What percentage of U.S. band and orchestra educators consistently use culturally responsive teaching?
2. What percentage of U.S. band and orchestra educators are knowledgeable of culturally responsive teaching concepts?
3. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching usage ($p \leq .05$)?
4. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching knowledge ($p \leq .05$)?
5. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching usage ($p \leq .05$)?
6. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching knowledge ($p \leq .05$)?

7. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching usage ($p \leq .05$)?

8. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching knowledge ($p \leq .05$)?

Chapter III outlined the procedures needed to investigate the research questions within the current study. First, a description of the sampling procedures was provided. Second, the data collection procedure was identified. Third, survey development techniques were listed, including the pilot study developed as a means to finalize the *Survey of Culturally Responsive Teaching* (SCRT) and data collection techniques. The SCRT administration procedures follow. Chapter III continues with a description of the procedures that were developed to answer the current study's research questions, including the null hypotheses that were created to answer Research Questions Three through Eight. A description of the SCRT data analysis was included. A short summary of the procedures devised to answer the current study's research questions concludes Chapter III.

The current study's research design was survey based. The purpose of survey research is to produce statistics about a target population (Fowler, 2014), which, for the current study, was United States public secondary school instrumental music educators who were members of the National Association for Music Education (NAfME). A survey was the preferred type of data collection procedure for the current study because of the large population size (N = 19,984), economy of design, and quick turnaround in data collection (Creswell, 2009). The current study investigated whether instrumental music educators across the United States were knowledgeable of and consistently used

culturally responsive teaching approaches in their classrooms. The data that were collected and analyzed to answer the current study's research questions were not available elsewhere, thus assuring the appropriateness of a survey for data collection as related to the current study's research questions.

The Population and Sample

The current study's population (N = 19,984) was public school instrumental music educators teaching in secondary schools in the United States, who were members of the National Association for Music Education (NAfME). Representatives of the NAfME Research Survey Assistance Program selected a sample of 10,864 NAfME members as participants for the current study, and also administered the online survey developed for this study to participants on behalf of the researcher. A census of the identified target population was not practical due to the cost associated with using the NAfME Research Survey Assistance Program and because the target population was quite large (N = 19,984). Sampling the target population of the current study was the preferred approach because the sample approximated the results of a complete census of the target population (Crano & Brewer, 2002). Two hundred twelve (n = 212) participants responded to the survey. Forty-three surveys were incomplete and discarded, leaving 170 responding participants.

The NAfME Research Survey Assistance Program randomly selected a sample from the target population. The sample was selected using the following steps: (1) a list of all NAfME members that met the target population's criteria, that each participant was an instrumental music educator teaching in a public secondary school, was compiled, (2)

the Random function in Microsoft Excel® was used to assign a number to each NAfME member selected, and (3) the list was sorted ascending and the sample was chosen based on the researcher's chosen number of study participants (R. Poorbaugh, personal communication, January 23, 2020). The survey administration included NAfME members from each U.S. state, that was necessary to answer Research Question Three, is there a significant effect of teacher geographical location on culturally responsive teaching usage, and Research Question Four, is there a significant effect of teacher geographical location on culturally responsive teaching knowledge. Participant anonymity was ensured using the "anonymize response" setting in Qualtrics Experience Management Software®. To ensure confidentiality, data were stored initially in Qualtrics®, that is password-protected data collection software. Data were exported to and stored in The University of North Carolina at Greensboro's (UNCG) Box cloud storage service. Data were accessed on UNCG's secure network using the researcher's UNCG internet account.

Research Questions Three and Four were as follows. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching usage ($p \leq .05$)? Is there a statistically significant effect of teacher geographical location on culturally responsive teaching knowledge ($p \leq .05$)? To aid in answering Research Questions Three and Four, participants completed a survey item that asked them to choose the geographical location in which they grew up. The locations were based on McKoy's (2013) study of the effects of selected demographic variables on music student educators' self-reported cross-cultural competence. The U.S. regions were East South

Central, West South Central, New England, Pacific, West North Central, East North Central, Mountain, Middle Atlantic, and South Atlantic. Participants who grew up outside the United States were able to state the country in which they grew up.

Data Collection Instrument

Development of the Survey

McKoy's *Cross-Cultural Competence Survey* (McKoy, 2013) and Rhodes's *Culturally Responsive Teaching Survey* (Rhodes, 2017) were modified for inclusion in the current study. The survey of the current study was entitled *Survey of Culturally Responsive Teaching* (SCRT), and was partially based on the McKoy (2013) and Rhodes (2017) surveys (See Appendix A). Seven items from the McKoy (2013) study, five items from the Rhodes (2017) study, and five researcher-created items were included in the SCRT. The survey was developed and administered via Qualtrics®, a web-based survey development software, to maximize cost and time efficiency in administration.

Fifteen items in the survey were answered using a Likert-type scale ranging from "Never" to "Always" or "Strongly Disagree" to "Strongly Agree," depending on the survey construct. In the data analysis section of the current study, the range for each scales was one through five, with "Never" and "Strongly Disagree" receiving one point and "Always" and "Strongly Agree" receiving five points. Items three through ten addressed specific tasks that culturally responsive educators apply in their classrooms, and were included in the *Usage* construct. The purpose of items 3 through 10 was to measure the extent to which participants used culturally responsive teaching approaches consistently in their classes. Items 11 through 17 measured participants' knowledge of

culturally responsive teaching, regardless of whether participants employed culturally responsive teaching approaches in their classrooms. These items were the *Knowledge* construct. Participants provided demographic information by answering two questions at the beginning of the survey. These questions were used to answer the research questions related to geographical location, grade level, and whether participants taught band or orchestra.

Pilot Test of Administration Procedures

Since the survey included in the current study was developed from a combination of prior survey items and researcher-created items, the survey was pilot tested prior to final administration. Participants in the pilot test were band and orchestra educators working in public schools in central North Carolina (n = 31) because these educators were similar to the participants that completed the final survey (Nardi, 2006). Following pilot survey administration, pilot participants were asked to answer questions regarding the quality of the survey to determine if it needed further editing. The primary purpose of the proposed survey's pilot study was to determine the response rate and to estimate the survey's reliability and validity, so that adjustments can be made if necessary, prior to final administration. Another goal of the pilot survey was to determine if the sample size was sufficient (Dillman, Smyth, & Christian, 2014).

Although the pilot study is a popular tool for developing surveys, there are few studies in the social science literature that provide guidelines for sample sizes (Johanson & Brooks, 2010). However, some relevant articles exist that provide insight into pilot study sample size. For instrument development, Hertzog (2008) recommended a sample

size of between 25 and 40 participants. Johanson and Brooks (2010) suggested that 30 participants from the target population is a reasonable minimum recommendation for a survey pilot study. For the current pilot study, a sample size of thirty-one was selected.

Pilot Survey of Participants and Procedures

The pilot survey was administered via an emailed link sent to band and orchestra directors who taught in public secondary schools in central North Carolina (n = 31). Prior to pilot survey administration, a cover letter was sent to potential participants explaining the pilot study's purpose. Eight participants submitted pilot surveys. Two surveys were incomplete and were discarded, resulting in a response rate of 19.36%.

The purpose of the pilot test was to assess several characteristics of the survey process including reliability, validity, and response rate. Every characteristic of the survey administration design, from the introductory email invitation to the survey's appearance must be carefully considered to entice as many sample participants as possible to respond (Dillman, Smyth, & Christian, 2014). Pilot testing the survey afforded the researcher a chance to modify problematic issues related to the survey's design and administration. Several participants were interviewed regarding aspects of the pilot survey because interviews with members of the target population can help determine whether aspects of the survey affect their willingness to respond (Dillman, Smyth, & Christian, 2014).

Pilot Survey Reliability and Validity

To obtain a reliability estimate of the survey, data from the pilot test were analyzed using Statistical Package for the Social Sciences (SPSS), version 26.0. An

overall reliability estimate was computed using Cronbach's coefficient alpha, as well as for each construct. Cronbach's alpha was computed for the culturally responsive teaching *Usage* construct and included eight items. The scale for the culturally responsive teaching *Usage* construct had a moderate level of internal consistency, as evidenced by a Cronbach's alpha coefficient of .679. The culturally responsive teaching knowledge construct included seven items and had a moderate level of internal consistency (Ursachi, Horodnic, & Zait, 2015), with a Cronbach's alpha coefficient of .622. The internal consistency of the entire set of items was also computed using Cronbach's alpha. The entire item set had a moderate level of internal consistency at .655. Items used in the pilot survey are presented in Table 1.

Table 1. Pilot Survey Items.

Culturally Responsive Teaching Usage
1. I provide rubrics and progress reports to students.
2. I make an effort to get to know students' families and backgrounds.
3. I examine musical selections for appropriate melodies and themes.
4. I spend time outside of class learning about the cultures and languages of students.
5. I learn words in students' native languages where appropriate.
6. I ask for student input when planning lessons and activities.
7. I survey students to learn about their classroom preferences.
8. I tailor music instruction to the needs of all my students.
Culturally Responsive Teaching Knowledge
9. Instructing students in the music of different racial/ethnic groups and cultures is important in my classes.
10. I know what multicultural education means.
11. I know what culturally responsive teaching means.
12. I understand culturally responsive teaching, but I don't know how to incorporate it in my own teaching.
13. I am unsure of the cultural qualities of social groups other than my own.
14. I can explain how culture influences students' learning of musical content.
15. I understand how factors related to culture, race, and ethnicity may impact the music teaching process.

Content validity can be assessed via survey analysis by a set of experts who have knowledge of culturally responsive teaching (Litwin, 1995). The survey for the current study was developed in part by adapting McKoy's *Cross-Cultural Competence Survey* (McKoy, 2013) and Rhodes's *Culturally Responsive Teaching Survey* (Rhodes, 2017). Music education faculty members at The University of North Carolina at Greensboro assessed the pilot study's survey items to ensure acceptable content validity.

Final Survey Administration

Pilot study participants had the opportunity to offer suggestions for improving the survey. Appropriate suggestions were used to amend the survey into a finalized product. After revising the survey into its final form, it was administered via NAfME's Research Survey Assistance program to randomly selected participants along with a cover letter explaining the purpose of the study. Participants had two weeks to complete the survey. At the end of the initial administration, a reminder email was sent asking for survey completion. The total survey administration occurred over a three week time period.

Response Rate of Participants

Fosnacht, Sarraf, Howe, and Peck (2017), while studying the importance of high response rates of college surveys, found that surveys with small sampling frames require response rates between 20 and 25 percent to be confident in the survey's estimates, while surveys with large sampling frames can obtain acceptable estimates with lower response rates than small sample survey studies. Punch (2003) suggested striving for a response rate of 60%, but this percentage is general in nature. A distinction between survey types (online, mail, face-to-face interview, etc.) was not made. Miksa, Roeder, and Biggs

(2010) created a survey to examine the effectiveness of electronic versus paper surveys. The final response rate for their survey was 66%, which was much higher than those participants that completed the paper survey, but this high response rate does not seem to be the norm. Typically, response rates for online surveys were lower than for their paper counterparts (Nulty, 2008). The response rate for Strand's (2006) survey of Indian music educators yielded a response rate of 53%, but no indication of survey type was given. Hopkins's (2013) survey was a mixed-mode survey (mail and online) with a response rate of 28%. Cook et al. (2000), in a meta-analysis of web-based survey response rates, found a mean response rate based on 68 surveys was 39.6%. Because the response rate for online surveys are often lower than other survey modes, a response rate goal for the current survey is adequate at 30%.

Web-based, or emailed surveys are often desirable to researchers because of their ease of use. Data collection, data analysis, and a reduction in cost are all advantages inherent to email surveys (Fowler Jr., 2009). One of the drawbacks of email surveys, however, is that response rates have declined in the last decade (Saleh & Bista, 2017). Though response rate is important in survey analysis, several factors must be considered when assessing a survey's quality. In the case of the current research, the ease in data collection and analysis, as well as the very low cost associated with a link embedded in an email outweighed the potential for a lower response rate through other means. To counter the possible low response rate, a reminder email was sent to non-respondents two weeks after the initial survey administration. Also, a cover letter that encouraged participation was included in the survey administration.

Survey Bias

Survey bias is a type of sampling error in which the participants responding to a survey are somehow systematically different than the target population (Fowler, 2009). Several types of bias exist including selection bias, coverage bias, and nonresponse bias. Selection bias can be controlled by using random sampling when compiling the sampling frame (Blair & Blair, 2015). The sample for the current study was selected using random sampling, thus limiting the level of selection bias based on the procedures and outcome of the data collection.

Final Survey Data Analysis Procedures

The study's first two research questions were as follows. What percentage of United States band and orchestra educators are familiar with culturally responsive teaching? What percentage of United States band and orchestra educators use culturally responsive teaching consistently? Descriptive statistics were used to answer these questions including frequencies, percentages, means, and standard deviations.

Nonparametric Statistical Testing

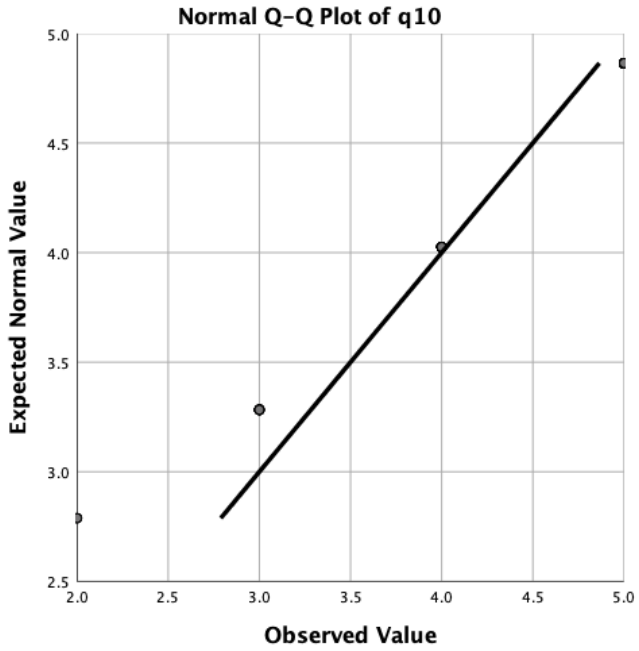
Data pertaining to Research Questions 3 through 8 were analyzed using the One-Sample Kolmogorav-Smirnov (KS) test and the Kruskal-Wallis test. The KS test was used to determine if the survey results violated the parametric assumption of normality. If the data were non-normal, the use of nonparametric statistical testing for further data analysis was appropriate. The Kruskal-Wallis test is the nonparametric equivalent to the parametric oneway analysis of variance (ANOVA).The Kruskal-Wallis test was chosen

for the current study's data analysis because of violations of assumptions when the ANOVA were considered.

Test Assumptions

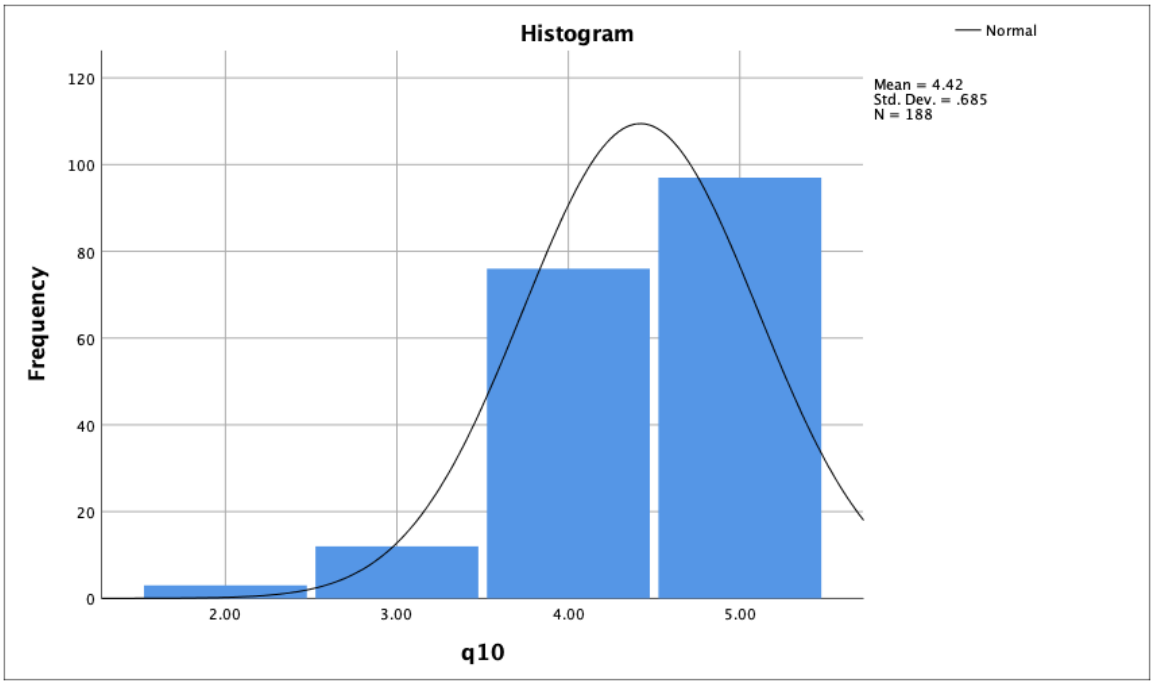
One of the primary reasons for using nonparametric statistical tests, such as the Kruskal-Wallis test, is that an assumption of the parametric equivalent is violated, namely that a population characteristic is not normally distributed (Brysbaert, 2011). The use of the oneway analysis of variance assumes a normally distributed population (Iverson & Norpoth, 1987; Weiss, 2006). During the middle of the twentieth century, the ANOVA was widely believed to be robust against violations of normality, but that belief has been questioned (Zimmerman, 2011). Normality for the current study's data set was visually checked using normal Q-Q plots, histograms fitted with normal curves, and boxplots. Figure 1 shows a Normal Q-Q plot for item 10. A quick visual inspection of the Q-Q plot in Figure 1 shows only one item choice to be on the line that indicated normality. Response frequencies for the *Rarely* item choice are quite far from the normal line. There is no plot for the *Never* item choice because no participant chose that response for item 10.

Figure 1. Normal Q-Q Plot for Item 10



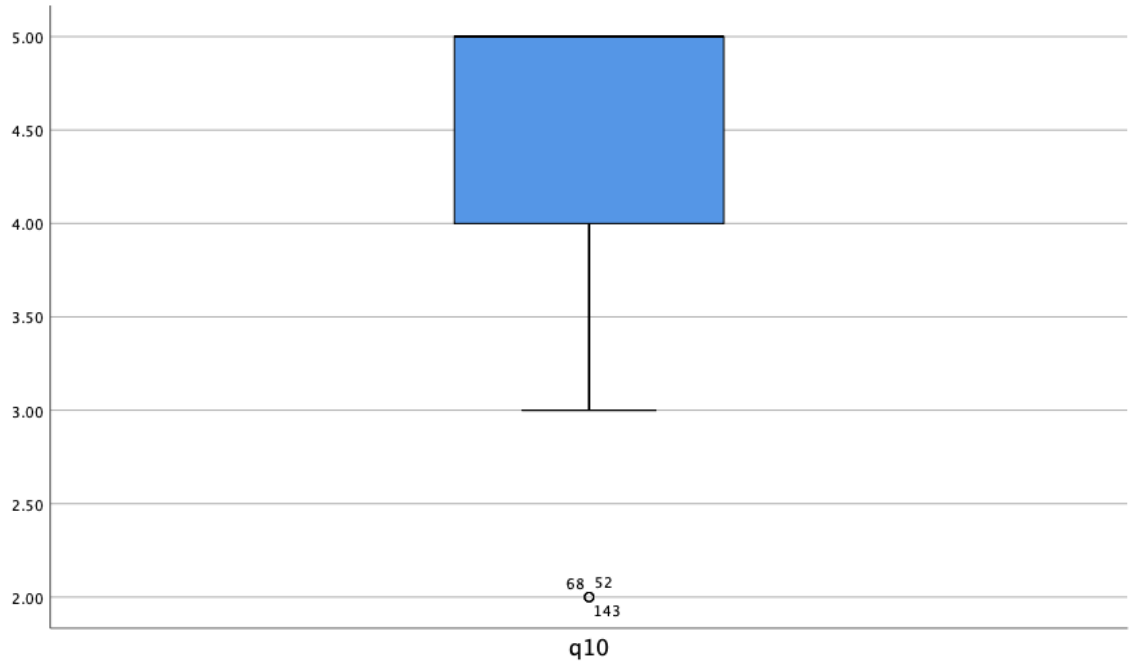
A histogram for item 10 is shown in Figure 2. The histogram indicated that the data are negatively skewed, which shows a non-normal distribution.

Figure 2. Histogram with Normal Curve for Item 10



A boxplot was developed for item 10, which is shown in Figure 3. Similar to the Q-Q plot and histogram for item ten, the boxplot indicated that the data for item ten are not normal.

Figure 3. Boxplot for Item 10



Though visual inspection of the graphs and charts for item 10 showed data that were not distributed normally, neither the graphs or charts were able to provide conclusive evidence of normality (Yap & Sim, 2011), and thus were not sufficient for the strictness of defensible analysis (Corder & Foreman, 2014). Since a visual inspection of the plots and graphs associated with the survey items provided only a subjective analysis of the distribution of item choices, further analysis was necessary. To provide a concrete estimate of the normality of the survey items' response distributions, which would ensure the appropriate use of nonparametric statistical testing for the current study's data set, the KS test was run using SPSS. Table 2 shows the *KS* statistic and the asymptotic significance levels of each *SCRT* item.

Table 2. KS Statistic and Asymp. Sig. Levels for SCRT Items

Item	**N**	***KS***	**Asymp. Sig.**
3	170	.202	.00
4	170	.246	.00
5	170	.216	.00
6	170	.203	.00
7	170	.176	.00
8	170	.231	.00
9	170	.179	.00
10	170	.314	.00
11	170	.277	.00
12	170	.290	.00
13	170	.290	.00
14	170	.214	.00
15	170	.225	.00
16	170	.309	.00
17	170	.318	.00

The null hypothesis for the KS test was that the sample survey data comes from a population that is normally distributed (H_0: P = P_0, where P is the sample distribution). Results of the KS test indicated that for each item's response distribution, the data were statistically significant. The null hypothesis for the KS test was rejected. For each *SCRT* item, the data were not normal. Since normally distributed data is a key assumption of the ANOVA (Berkman & Reise, 2012), and since the data for the current study were not normally distributed, the nonparametric equivalents were deemed appropriate to use.

Hypothesis testing with the ANOVA assumes that the dependent variable was measured at the interval level (Rietveld & van Hout, 2005). However, the Likert-type data collected for the current study was measured at the ordinal level (Bandalos, 2018), which required nonparametric hypothesis testing (Kraska-Miller, 2014; McKnight & Najab, 2010; Rietveld & van Hout, 1993; Vogt & Johnson, 2011). Stevens (1946)

suggested that researchers should not conduct statistical testing involving means and standard deviations (parametric tests) when data was measured at the ordinal level. As Plichta and Garzon (2009) stated, conducting the Kruskal-Wallis test was appropriate to analyze the data of the current study because it allowed for ordinal data to be analyzed in a similar manner as interval data in the ANOVA.

The researcher of the current study appropriately conducted nonparametric statistical testing because the data violated the assumptions of parametric statistical testing. While assumption violations of the ANOVA suggested exploring nonparametric statistical tests, the nonparametric statistical tests have their own assumptions to consider as well. Some nonparametric assumptions are the same as their parametric equivalents, such as the requirement that participants are randomly selected (Verma & Abdel-Salam, 2019). The current study's data collection methods included random sampling. Also, the independent variables should be independent from each other (Kraska-Miller, 2014), as are the independent variables in the current study. Each of the current study's variables meet the nonparametric statistical testing requirements as listed previously.

The researcher ran the nonparametric Kruskal-Wallis test to analyze the data pertaining to Research Questions Three through Eight. This test measures differences in group mean ranks. Vogt and Johnson (2011) provided a succinct definition of the Kruskal-Wallis Test. The Kruskal-Wallis Test is

> A nonparametric test of statistical significance used when testing more than two independent samples; symbolized *H*. It is an extension of the Mann-Whitney U test, and of the Wilcoxon test, to three or more independent samples. It is particularly useful for samples of different sizes. It is a nonparametric one-way ANOVA for rank order data and is based on medians rather than means. (p. 196)

Because the data analysis for Research Question Three and Four included nine groups in the independent variable and the data were measured at the ordinal level, the Kruskal-Wallis is the appropriate test to run. The Kruskal-Wallis test was conducted as a part of the data analysis for Research Questions Five through Eight, which contained two groups in the independent variables for each research question.

Null Hypotheses

Each of the statistical tests run for the data pertaining to Research Questions Three through Eight had a dependent variable measured at the ordinal level, which necessitated nonparametric statistical testing using the Kruskal-Wallis test. The Kruskal-Wallis test compares rank means, which requires the null hypotheses to be stated in terms of population means (Welkowitz et al., 2011). The null hypothesis for Research Questions 3 and 4 was as follows.

$$H_0: \mu_1 = \mu_2 = \ldots \mu_9$$

The alternative hypothesis for Research Questions 3 and 4 is as follows.

$$H_1: \mu_1 \neq \mu_2 \neq \ldots \mu_9$$

The null hypothesis for Research Questions 5 through 8 is as follows.

$$H_0: \mu_1 = \mu_2$$

The alternative hypothesis for Research Questions 5 through 8 was the same and is as follows.

$$H_1: \mu_1 \neq \mu_2$$

Summary

Research Question One of the study was designed to determine the percentage of instrumental music educators that used culturally responsive teaching approaches consistently in their daily lessons. To address Research Question One, descriptive statistics were computed to determine the means, standard deviations, and item frequencies of participants' responses to SCRT items 3 through 10. Research Question Two of the study was designed to determine the percentage of instrumental music educators that were knowledgeable of culturally responsive teaching concepts. To address Research Question Two, descriptive statistics were calculated to determine the means, standard deviations, and item frequencies of rating responses of participants to SCRT items 11 through 17. To answer Research Questions One and Two, item response percentages were derived from participants' item responses.

The third research question of the study was as follows. "Is there a statistically significant effect of teacher geographical location on culturally responsive teaching usage?" This research question was answered using a Kruskal-Wallis test. The independent variable was participant geographic location and the dependent variable was responses to the culturally responsive teaching *Usage* construct on the SCRT. Items 3 through 10 of the survey included specific approaches that are present in culturally responsive music educators. Participants chose the level of the specific behavior such as *Always* or *Never*.

Research Question Four of the study investigated whether a statistically significant effect of teacher geographical location on culturally responsive teaching

knowledge existed. The Kruskal-Wallis test was run to answer Research Question Four. The independent variable was participant geographic location and the dependent variable was responses to the culturally responsive teaching *Knowledge* construct on the SCRT, items 11 through 17. Participants chose their level of knowledge presented in items 11 through 17 by choosing a descriptor such as *Strongly Agree* or *Strongly Disagree*. Should the Kruskal-Wallis test indicate a statistically significant relationship, post-hoc analysis with Dunn's Multiple-Comparison Test will be used to examine pairwise comparisons.

The fifth and sixth research questions of the study examined the effect of grade level taught on usage of culturally responsive teaching approaches and knowledge of culturally responsive teaching concepts, respectively. Research questions Seven and Eight examined the effect of ensemble type taught on usage of culturally responsive teaching approaches and knowledge of culturally responsive teaching concepts, respectively. Research Questions Three through Eight were answered by analyzing SCRT response data with the Kruskal-Wallis test.

CHAPTER IV

RESULTS

The purpose of the current study was to determine the extent to which secondary school instrumental music educators use culturally responsive teaching approaches and to determine their level of knowledge regarding culturally responsive teaching concepts. A secondary purpose was to determine whether there were significant differences in culturally responsive teaching usage and knowledge among instrumental music educators based on their geographic location, the grade level they teach (middle or high school), and ensemble type they teach (band or orchestra). As related to the current study, therefore, the researcher investigated answers to the following research questions.

1. What percentage of U.S. band and orchestra educators consistently use culturally responsive teaching?
2. What percentage of U.S. band and orchestra educators are knowledgeable of culturally responsive teaching concepts?
3. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching usage ($p \leq .05$)?
4. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching knowledge ($p \leq .05$)?
5. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching usage ($p \leq .05$)?
6. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching knowledge ($p \leq .05$)

7. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching usage ($p \leq .05$)?

8. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching knowledge ($p \leq .05$)?

Chapter IV was organized by a description of the survey administration procedures, participant demographics, and results of data analysis pertaining to each research question. The first two items on the *Survey of Culturally Responsive Teaching* (SCRT) were developed to provide demographic information that aided in answering the research questions. Survey items concerning demographics asked participants to identify the United States region in which they grew up, as well as the grade level and type of instrumental music ensemble they taught. The remaining research questions were answered with the aid of statistical analyses computed with SPSS.

The SCRT was administered via email to 10,864 participants. The target population of the study was instrumental music educators working in United States secondary schools. Surveying each instrumental music educator in all United States secondary schools, however was challenging financially, as well as time consuming. Instead, the sampling frame comprised members of the National Association for Music Education (NAfME) that were also instrumental music educators teaching in United States secondary schools. At the time, the total United States population that met these criteria were 19,984 instrumental music educators. The sample was chosen by the NAfME Research Survey Assistance Program that was designed to include approximately 10,000 participants. The number of participants included in the survey administration was chosen based on cost and the need for an adequate number of

responses. The survey was administered to 10,864 potential participants on January 23, 2020. Three hundred sixty emails were identified as undeliverable, thus, the final sample size was 10,504. The number of responses were 212 and the response rate was approximately 2%. Thirty-nine surveys were returned incomplete and were discarded. Responses from participants that grew up outside the U.S. were discarded as well. One hundred seventy surveys were included in the data analysis.

Survey items were grouped into two sections, usage of culturally responsive teaching approaches and knowledge of culturally responsive teaching concepts. Eight items were devoted to culturally responsive teaching usage and seven were devoted to knowledge of culturally responsive teaching concepts. Items used in the SCRT are listed in Table 3.

Table 3. SCRT Items by Usage and Knowledge

Culturally Responsive Teaching Usage
3. I provide rubrics and progress reports to students.
4. I make an effort to get to know students' families and backgrounds.
5. I examine musical selections for culturally accurate melodies and themes.
6. I spend time outside of class learning about the cultures and language of my students.
7. I learn words in students' native languages where appropriate.
8. I ask for student input when planning lessons and activities.
9. I examine musical selections for cultural accuracy with regard to variables such as instrumentation, melodic/harmonic/rhythmic elements, timbre, and form.
10. I tailor music instruction to the needs of all my students.
Culturally Responsive Teaching Knowledge
11. Instructing students in the music of different racial/ethnic groups and cultures is important in my classes.
12. I know what multicultural education means.
13. I know what culturally responsive teaching means.
14. I understand culturally responsive teaching, but I don't know how to incorporate it in my own teaching.
15. I am unsure of the cultural qualities of social groups other than my own.
16. I can explain how culture influences students' learning of musical content.
17. I understand how factors related to culture, race, and ethnicity may impact the music teaching process.

Characteristics of the Sample

The target population of the study was secondary school instrumental music educators teaching in the United States, which, at the time of the survey administration, was 19,984 instrumental music educators. A sample of instrumental music educators was selected randomly from the target population. The SCRT was delivered via email to 10,504 potential participants. Two hundred twelve instrumental music educators responded to the survey. Thirty-nine surveys were returned incomplete and thus discarded. Responses from participants that indicated they grew up outside of the U.S. were discarded as well (N = 3), leaving a final participant count of 170.

The first survey item was designed to investigate the region of the United States where participants grew up. The East South Central region consisted of Alabama, Kentucky, Mississippi, and Tennessee. The West South Central region included Arkansas, Louisiana, Oklahoma, and Texas. The New England region was comprised of Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont. The Pacific region included Alaska, California, Hawaii, Oregon, and Washington State. The East North Central region consisted of Illinois, Indiana, Michigan, Ohio, and Wisconsin. The Mountain region included Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming. The Middle Atlantic region comprised Connecticut, New Jersey, New York, and Pennsylvania. The South Atlantic region included Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, and West Virginia. The largest number of participants grew up in the South Atlantic region (18.24%, $n = 31$). The smallest number of participants (other than those who grew up outside of the United States) grew up in the East South Central region (4.18%, $n = 7$). The distribution of the sample by region is shown in Table 4.

Table 4. Distribution of Sample by Region

Region	**Frequency**	**Percent**
East South Central (Alabama, Kentucky, Mississippi, Tennessee)	7	4.18
West South Central (Arkansas, Louisiana, Oklahoma, Texas)	10	5.88
New England (Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)	11	6.47
Pacific (Alaska, California, Hawaii, Oregon, Washington State)	16	9.41
West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota)	22	12.94
East North Central (Illinois, Indiana, Michigan, Ohio, Wisconsin)	19	11.18
Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming)	29	17.06
Middle Atlantic (Connecticut, New Jersey, New York, Pennsylvania)	25	14.71
South Atlantic (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia)	31	18.24
Total	170	100.00

Participants were asked to provide the grade level in which they taught. Eighty-eight participants (51.76%) taught middle school students and 82 participants (48.24%) taught high school students. Participants were asked to provide the instrumental ensemble type they taught. Forty-six participants taught orchestra and 124 participants taught band. The largest percentage of participants taught band (72.94%, $n = 124$), while the smallest

number of participants taught high school orchestra (27.06%, *n* = 46). The distribution of survey responses by grade level and area of concentration is shown in Table 5.

Table 5. Distribution of Sample by Grade Level and Ensemble Type

Grade Level	**Frequency**	**Percent**
Middle School	88	51.76
High School	82	48.24
Total	170	100.00
Ensemble Type	**Frequency**	**Percent**
Orchestra	46	27.06
Band	124	72.94
Total	170	100.00

Analysis of Research Question One

Research Question One of the study was as follows. What percentage of U.S. band and orchestra educators consistently use culturally responsive teaching approaches? Survey items 3 through 10 were developed using specific culturally responsive teaching approaches that possibly were present in instrumental music classes. The extent to which participants presented these approaches in their teaching may provide evidence of their usage of culturally responsive teaching approaches. Caution, however, must be practiced in the application of a label such as *culturally responsive*. The strategies presented in the current study's survey were not exhaustive. The researcher did not assume that instrumental music educators who do not use these strategies were not culturally responsive. Instead, the researcher assumed that instrumental music educators who used the approaches included in items 3 through 10 of the survey were considered culturally responsive, according to the operational definition of "culturally responsive teaching" in the current study.

To address Research Question One, descriptive statistics were computed to determine the means, standard deviations, and item frequencies of participants' responses to SCRT items 3 through 10. These eight items addressed participants' usage of culturally responsive teaching approaches. In other words, items 3 through 10 measured participants' evidence of culturally responsive teaching usage. For items 3 through 10, participants (n = 170) selected one of five Likert responses including *Never, Rarely, Sometimes, Usually,* and *Always.* Score values for each response ranged from 1 (*Never*) to 5 points (*Always*). Means, standard deviations, frequencies, and percentages for culturally responsive teaching usage are presented in Table 6.

Table 6. Descriptive Statistics for SCRT Usage Responses

Survey Items 3-10	Mean	*SD*	Five-point Response Scale				
			Never freq. (%)	Rarely freq. (%)	Sometimes freq. (%)	Usually freq. (%)	Always freq. (%)
3. I provide rubrics and progress reports to students	3.42	1.13	9 (5.29)	29 (17.06)	46 (27.06)	54 (31.76)	32 (18.82)
4. I make an effort to get to know students' families and backgrounds.	4.18	.78	0 (0.00)	3 (1.76)	30 (17.65)	70 (41.18)	67 (39.41)
5. I examine musical selections for culturally accurate melodies and themes.	3.57	1.06	4 (2.35)	26 (15.29)	45 (26.47)	59 (34.71)	36 (21.18)
6. I spend time outside of class learning about the cultures and languages of my students.	3.19	1.02	8 (4.71)	33 (19.41)	66 (38.82)	45 (26.47)	18 (10.59)
7. I learn words in students' native languages where appropriate.	3.33	1.10	9 (5.29)	29 (17.06)	57 (33.53)	47 (27.65)	28 (16.47)
8. I ask for student input when planning lessons and activities.	3.47	.95	3 (1.76)	19 (11.18)	70 (41.18)	51 (30.00)	27 (15.88)
9. I examine musical selections for cultural accuracy with regard to variables such as instrumentation, melodic/harmonic/rhythmic elements, timbre, and form.	3.34	1.20	11 (6.47)	35 (20.59)	44 (25.88)	45 (26.47)	35 (20.59)
10. I tailor music instruction to the needs of all my students.	4.41	.69	0 (0.00)	3 (1.76)	11 (6.47)	69 (40.59)	87 (51.18)

N = 170

Analysis of Individual Responses to Items 3-10

Item 3 was designed to measure the extent to which participants provided rubrics and progress reports to students. Providing students with rubrics and progress reports is culturally responsive because educators can provide individualized instruction and student-specific progress updates, which can be adjusted as needed based on students' needs. The *Never* (*n* = 9) response was an outlier at 5.29% of the total number of

responses. The remaining responses ranged from 17.06% of participants (*n* = 29) choosing *Rarely* to 31.76% of participants (*n* = 54) choosing *Usually*. The purpose of item 4 was to measure the extent to which instrumental music educators attempted to get to know students' families and backgrounds, which provided an insight into students' cultures. Most participants chose *Usually* (41.18%, *n* = 70,), with *Always* chosen second most (39.41%, *n* = 67).

Item 5 was designed to investigate one of the methods in which instrumental music educators selected musical examples for classroom use. Lind and McCoy (2016) explained that culturally responsive music educators "work to make informed curricular and programmatic choices that connect to what they know about their students" (p. 95). Item 5 measured the extent to which participants examined musical selections for culturally accurate melodies and themes. The majority of participants chose *Usually* (34.71% *n* = 59,), but several either selected *Sometimes* (26.47%, *n* = 45) or *Always* (21.18%, *n* = 36).

Previous research emphasized that culturally responsive instrumental music educators seek out information regarding various cultures of students in their classrooms (Abril, 2009; Gay, 2002; Rychly & Graves, 2012). Item 6 measured the extent to which instrumental music educators attempted to learn about their students' cultures. The majority of participants (75.88%, *n* = 129) selected the qualifiers *Sometimes*, *Usually*¸ or *Always.* Among these participants, most participants selected either *Sometimes* (38.82%, *n* = 66) or *Usually* (26.47%, *n* = 45).

Item 7 was designed to measure the extent to which participants learned words in students' native languages, as suggested by Rhodes (2013). The majority of participants either selected *Sometimes* (33.53%, *n* = 57) or *Usually* (27.65%, *n* = 52). Item 8 measured the extent to which instrumental music educators allowed students the opportunity to provide input for lessons and activities. Ladson-Billings (1995b) explained that culturally responsive educators are receptive to students' ideas for classroom activities and lessons, which draws from students' cultural backgrounds. The majority of participants selected *Sometimes* (41.18%, *n* = 70) or *Usually* (30.00%, *n* = 51). Item 9 measured the extent to which participants examined musical selections for cultural accuracy with regard to instrumentation; melodic, harmonic, and rhythmic elements; timbre; and form. The majority of participants (52.35%, *n* = 89) selected the qualifiers *Sometimes* or *Usually*. Among these participants, the majority of participants selected *Usually* (26.47%, *n* = 45).

The purpose of Item 10 was to measure the extent to which participants used teaching approaches designed to meet all students' needs. Participants overwhelmingly chose scale responses that affirmed their belief that their instruction met the needs of all students. Participants selected *Always* most frequently (51.18%, *n* = 87), and participants selected *Usually* (40.59%, *n* = 69) second most. Combined, these two selections comprised 91.77% of all responses for item 10.

Usage Analysis – Use of Culturally Responsive Teaching Approaches

Research Question One asked whether instrumental music educators used culturally responsive teaching approaches consistently in their daily lessons. To address

this question, an analysis of the responses to items 3 through 10 as a whole was necessary. *Consistently* was operationally defined in the current study by participants' Likert-scale responses of *Usually* or *Always.* In other words, consistent use of culturally responsive teaching occurred when participants chose *Usually* or *Always* for items 3 through 10.

A grand mean was calculated for responses to items 3 through 10 (*GM* = 3.61, *SD* = .621). A grand mean of 3.61 indicated that mean responses to items 3 through 10 were in the positive range of the Likert-type scale of survey items 3 through 10, which included participants' responses of *Usually* and *Always*. Additionally, the grand median of responses for items 3 through 10 was 4.00. A grand median of 4.00 revealed that the midpoint of the response distribution was in the positive range of the Likert-type scale of participants' survey responses to items 3 through 10. Both the grand mean (*M* = 3.70) and the grand median (4.00) demonstrated that the average and midpoint of participants' responses were in the positive range of the survey response scale. This conclusion is supported because the distribution of responses is negatively skewed with the mean response less than the median response, and thus, more than 50% of the participants responded above the mean of 3.70.

An examination of the mean percentage of the positive item choices (*Usually* and *Always*) for survey items 3 through 10 revealed that typically, most participants used culturally responsive teaching approaches consistently. Across items 3 through 10, the mean percentage of the number of participants who selected the *Usually* choice was 32.35 and the mean percentage of the *Always* choice was 24.26. The total number of

participants who chose either *Usually* or *Always* across items 3 through 10 was 96 participants, representing 56.47% of all participants' responses to the SCRT items 3 through 10. Individual item choice percentages and complete mean percentages for items 3 through 10 are displayed in Table 7.

Table 7. Mean Percentages for SCRT Usage Responses

	Item Response Percentages					
Items	**Never%**	**Rarely%**	**Sometimes%**	**Usually%**	**Always%**	**Consistently%**
3	5.29	17.06	27.06	31.76	18.82	50.58
4	0.00	1.76	17.65	41.18	39.41	80.59
5	2.35	15.29	26.47	34.71	21.18	55.89
6	4.71	19.41	38.82	26.47	10.59	37.06
7	5.29	17.06	33.53	27.65	16.47	44.12
8	1.76	11.18	41.18	30.00	15.88	45.89
9	6.47	20.59	25.88	26.47	20.59	47.06
10	0.00	1.76	6.47	40.59	51.18	91.76
Mean %	3.23	13.01	27.13	32.35	24.27	56.62

N = 170

Note: The "Consistently" column represents the combined percentage of the *Usually* and *Always* columns

The mean percentage of participants selecting *Usually* and *Always* across items 3 through 10 was 56.62, which was the percentage of participants that used culturally responsive teaching approaches consistently. However, due to the small sample size (*N* = 170), generalizing to the population of United States instrumental music educators is not warranted.

Analysis of Research Question Two

Research Question Two of the study was as follows. What percentage of U.S. band and orchestra educators are knowledgeable of culturally responsive teaching

concepts? Items 11 through 17 of the SCRT measured participants' knowledge and beliefs regarding culturally responsive teaching. Abacioglu, Volman, and Fischer (2020) maintained that educators' own attitudes are important for culturally responsive teaching. Components such as multicultural teaching, student race and ethnicity, and understanding how to incorporate these elements in teaching practices were foundational to the content of items 11 through 17. Similar to the discussion of Research Question One, the researcher did not postulate that the statements used in items 11 through 17 of the SCRT were an exhaustive list of culturally responsive teaching concepts. Agreement with the statements presented as items 11 through 17 however, indicated that participants possessed knowledge related to culturally responsive teaching concepts.

Data were analyzed using SPSS. Analyses of participants' responses to the SCRT items 11 through 17 were used to answer Research Question Two, and participants (n = 170) were asked to choose one of five Likert-type responses, *Strongly Disagree, Somewhat Disagree, Neither Agree nor Disagree, Somewhat Agree,* and *Strongly Agree.* Points were assigned to each scale response with one point assigned to *Strongly Disagree* and five points assigned to *Strongly Agree.* Descriptive statistics were calculated to determine the means, standard deviations, frequencies, and percentages associated with participants' responses to items 11 through 17. The results of the data analyses using descriptive statistics are presented in Table 8.

Table 8. Descriptive Statistics for SCRT Knowledge Responses

Survey Items 11-17	Mean	*SD*	Five-point Response Scale				
			SD freq. (%)	**D freq. (%)**	**NAD freq. (%)**	**A freq. (%)**	**SA freq. (%)**
11. Instructing students in the music of different racial/ethnic groups and cultures is important in my classes.	4.25	.85	1 (.59)	5 (2.94)	24 (14.12)	61 (35.88)	79 (46.47)
12. I know what multicultural education means.	4.36	.77	1 (.59)	5 (2.94)	9 (5.29)	71 (41.76)	84 (49.41)
13. I know what culturally responsive teaching means.	4.09	.96	3 (1.76)	13 (7.65)	13 (7.65)	77 (45.29)	64 (37.65)
14. I understand culturally responsive teaching, but I don't know how to incorporate it in my own teaching.	3.04	1.13	17 (10.00)	41 (24.12)	42 (24.71)	58 (33.53)	12 (7.06)
15. I am unsure of the cultural qualities of social groups other than my own.	2.38	1.08	41 (24.12)	59 (34.71)	37 (21.76)	31 (18.24)	2 (1.18)
16. I can explain how culture influences students' learning of musical content.	3.56	.98	5 (2.94)	24 (14.12)	33 (19.41)	87 (51.18)	21 (12.35)
17. I understand how factors related to culture, race, and ethnicity may impact the music process.	4.00	.88	3 (1.76)	10 (5.88)	18 (10.59)	92 (54.12)	47 (27.65)

N = 170

Note: **SD** = Strongly Disagree, **D** = Somewhat Disagree, **NAD** = Neither Agree nor Disagree, **A** = Somewhat Agree, **SA** = Strongly Agree

Analysis of Individual Responses to Items 11-17

Item 11 was designed to be indicative of participants' knowledge of and beliefs about culturally responsive teaching by measuring the extent to which participants (*n* = 170) agreed with the following statement. "Instructing students in the music of different racial and ethnic groups is important in my classes." Most participants selected *Strongly*

Agree (46.47%, *n* = 79) or *Somewhat Agree* (35.88%, *n* = 61). The mean of item eleven reinforces the finding that most participants selected one of the agree categories (*Somewhat Agree* or *Strongly Agree)* (M = 4.25, *SD* = .85).

Item 12 measured the extent to which participants understood, "multicultural education" (*n* =170). Rychly and Graves (2012) explained that multicultural education may be considered an umbrella term under which culturally responsive teaching exists. Without an understanding of multicultural education, knowledge of culturally responsive concepts may be diminished. Most participants selected either *Strongly Agree* (49.41%, *n* = 84) or *Somewhat Agree* (41.76%, *n* = 71). Similar to participants' responses to item 11, the majority of participants selected one of the agree responses (M = 4.36, *SD* = .77).

The purpose of item 13 was to measure the extent to which participants' (*n* = 170) could define the phrase, "culturally responsive teaching." Similar to items 11 and 12 of the SCRT, the majority of participants selected either *Somewhat Agree* (45.29%, *n* = 77) or *Strongly Agree* (37.65%, *n* = 64). The mean of participants' responses to item 13 supports the finding that the majority of participants' responses were in the agree category (M = 4.09, *SD* = .96).

While SCRT items 12 and 13 measured the extent to which participants' understood the definitions of terms related culturally responsive teaching, item 14 was designed to measure the extent to which participants understood how to incorporate culturally responsive teaching concepts in their daily instruction. The mean and standard deviation of item 14 (M = 3.04, *SD* = 1.13) supports the finding that participants' responses to item 14 were more varied than participants' responses to items 12 and 13.

Participants that selected *Strongly Agree* (7.06, *n* = 12) or *Somewhat Agree* (33.53%, *n* = 58) for item 14 were fewer than participants that selected *Strongly Agree* or *Somewhat Agree* for items 12 and 13. A possible reason for fewer participants selecting *Strongly Agree* or *Somewhat Agree* for item 14 than the same responses for items 12 and 13, is that the wording of item 14 may have confused some participants. Participants may have agreed with the item's first statement, *I understand culturally responsive teaching*, but disagreed with the item's second statement, *but I don't know how to incorporate it in my own teaching.* Some participants may not have understood culturally responsive teaching and not have known how to incorporate it in their own teaching. The potentially confusing wording of item 14 may have contributed to the participants' qualifier selections.

Item 15 was designed to identify the magnitude of participants' beliefs regarding culturally responsive teaching by measuring the extent to which participants (*n* = 170) agreed with the following statement. "I am unsure of the cultural qualities of social groups other than my own." The majority of participants selected either *Strongly Disagree* (24.12%, *n* = 41) or *Somewhat Disagree* (34.71%, n = 59), though participants' selections tended to be near the middle of the Likert scale (*Neither Agree nor Disagree*), with a wider frequency dispersion than many other SCRT items (M = 2.40, *SD* = 1.08). For the items grouped into the culturally responsive teaching knowledge construct, only item fourteen had a larger standard deviation (*SD* = 1.13) than did item fifteen (*SD* = 1.08), which suggests that items 14 and 15 were less reliable than the other items due to the large amount of variability in the data related to items 14 and 15.

The purpose of item 16 was to measure the extent to which participants understood how culture influences students' learning of musical content. It was designed to be music-learning specific, which differed from items 13 and 14, which measured general teaching behaviors. The majority of participants' selections (n = 170) were either *Strongly Agree* (12.35%, n = 21) or *Somewhat Agree* (51.18%, n = 87). Item 17 measured participants' understanding of how factors related to culture, race, and ethnicity may impact the music teaching process. Similar to item 16, item 17 was a music-teaching specific item. The majority of participants selected one of the agree qualifiers (*Somewhat Agree* or *Strongly Agree*) (81.77%, n = 139). Within the agree qualifier grouping, the majority of participants selected the *Somewhat Agree* qualifier (54.12%, n =92).

Knowledge Analysis – Knowledge of Culturally Responsive Teaching

A grand mean was calculated for responses to items included in the *Knowledge* construct (GM = 3.67), supporting the finding that the majority of participants selected responses in the *Knowledge* qualifier group (*Somewhat Agree* and *Strongly Agree* for items 11-13, 16-17; and *Somewhat Disagree* and *Strongly Disagree* for items 14-15) for SCRT items 11 through 17. This finding was confirmed through calculating the grand median of responses for items 11 through 17 (GMd = 4.00). A grand median of 4.00 indicated that the midpoint of the response distribution was in the positive range of the scale. Since both the grand mean (M =3.67) and the grand median (GMd = 4.00) indicated that most participants' responses were in the positive range of the *knowledge* construct, a conclusion was made that more than 50% of participants possessed knowledge of culturally responsive teaching concepts. This conclusion is supported

because the distribution of responses is negatively skewed with the mean response less than the median response, and thus, more than 50% of the participants responded above the mean of 3.67.

An examination of the mean percentage of the positive item choices (*Somewhat Agree* and *Strongly Agree*) for survey items 11 through 17 maintained that on average, the majority of participants are familiar with, and understood, culturally responsive teaching concepts. Across items 11 through 17, participants selected *Somewhat Agree* more frequently (42.44%) than they selected *Strongly Agree* (29.24%). Individual item choice percentages and complete mean percentages for each item choice are displayed in Table 9. For the final analysis of data pertaining to research question two, responses to items fourteen and fifteen were reverse scored in the analysis of knowledge item choices, due to the negative wording of the items.

Table 9. Mean Percentages for SCRT Knowledge Responses

	Item Response Percentage					
Item	**SD%**	**D%**	**NAD%**	**A%**	**SA%**	**Kn.%**
11	.59	2.94	14.12	35.88	46.47	82.35
12	.59	2.94	5.29	41.76	49.91	91.17
13	1.76	7.65	7.65	45.29	37.65	82.94
14	10.00	24.12	24.71	33.53	7.06	34.12
15	24.12	34.71	21.76	18.24	1.18	58.82
16	2.94	14.12	19.41	51.18	12.35	63.53
17	1.76	5.88	10.59	54.12	27.65	81.76
Mean %	2.69	10.84	14.79	42.44	29.24	70.67

N = 170

Note: **SD** = Strongly Disagree, **D** = Somewhat Disagree, **NAD** = Neither Agree nor Disagree, **A** = Somewhat Agree, **SA** = Strongly Agree, **Kn.** = Knowledge, a combination of Somewhat Agree and Strongly Agree

Percentage means for items 11 through 17, which were items related to culturally responsive teaching knowledge, were computed for each qualifier and the positive qualifiers were combined into a group labeled *Knowledge* (*Somewhat Agree and Agree*). The item choice labeled *Neither Agree nor Disagree* was not included due to the neutral nature of the choice. The mean percentage of the *Knowledge* group was 70.67 ($N = 170$), indicating that 70.67% of participants were knowledgeable about culturally responsive teaching concepts. Due to the small sample size, generalizing to the population of instrumental music educators is not advised.

Analysis of Research Question Three

Research Question Three was written as follows. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching usage ($p \leq .05$)? Survey data was analyzed using IBM SPSS Statistics software®. Specifically, the Kruskal-Wallis test was used to analyze SCRT responses to items 3 through 10 as the dependent variable that represented participants' usage of culturally responsive teaching approaches. Participants' geographical location served as the independent variable within the analysis. The Kruskal-Wallis test is the preferred test when the dependent variable is represented by ordinal data, and the independent variable contains three or more group, as does the current study (Lomax, 1998; Vogt & Johnson, 2011;). The Kruskal-Wallis analysis reported the Chi-Square X^2 critical value to test the null hypothesis. Results of the null hypothesis test was used to answer Research Question Three. The null hypothesis was that the distribution of participants' survey responses to items 3 through 10 were not different across identified geographic locations of the United States ($p \leq .05$).

Results of a Kruskal-Wallis test revealed that participants' responses to SCRT items 3 through 10 were not affected significantly by geographic location. In other words, the null hypothesis that was tested via the Kruskal-Wallis Chi Square test was retained. There were no statistically significant differences between participants' responses to the SCRT items 3 through 10 when grouped by geographic locations of the United States ($p > .05$). Table 10 displays the X^2 statistics and asymptotic significance level for SCRT items 3 through 10. The culturally responsive teaching *Usage* construct (items 3-10) was designed to measure the extent to which participants used teaching approaches such as providing rubrics for students, examining musical selections for culturally accurate melodies and themes, and making an effort to learn about students' families and backgrounds. When participants' responses to the items included in the culturally responsive teaching approaches construct were grouped by geographic location in the United States, the distributions for each item were all similar. Based on the results of the analysis for Research Question Three, the region of the United States in which participants grew up had no bearing on participants' selections for items 3 through 10.

Table 10. X^2 Values and Asymp. Sig. for SCRT Usage Grouped by U.S. Geographic Location

Item	X^2	Deg. Of Freedom	Asymp. Sig.
3	6.23	8	.622
4	8.27	8	.408
5	6.58	8	.583
6	4.66	8	.793
7	12.43	8	.133
8	3.17	8	.923
9	2.96	8	.937
10	6.91	8	.546

Note: Grouping Variable: In what region of the country did you primarily grow up?

Analysis of Research Question Four

Research Question Four was written as follows. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching knowledge ($p \leq .05$)? Similarly to the analysis pertaining to Research Question Three, the Kruskal-Wallis test was used to analyze SCRT responses to items 11 through 17 as the dependent variable that represented participants' knowledge of culturally responsive teaching concepts. Culturally responsive teaching concepts comprising the *Knowledge* construct included items related to understanding the core definitions of multicultural education and culturally responsive teaching, the ability to explain how culture influences students' learning, and understanding how culture, race, and ethnicity impacts the music process. Participants' geographical location served as the independent variable within the analysis. The Kruskal-Wallis analysis reported the Chi-Square X^2 critical value to test the null hypothesis. Results of the null hypothesis test was used to answer Research Question Four. The null hypothesis was that the distribution of participants' survey responses to

items that measured culturally responsive teaching knowledge was not significantly different across identified geographic locations of the United States ($p \leq .05$).

Results of a Kruskal-Wallis test revealed that participants' SCRT selections to items 11 and 13 through 17, were not significantly different when across geographic locations of the United States. These items measured culturally responsive teaching knowledge such as the meaning of culturally responsive teaching; ability to include culturally responsive teaching in lessons; and knowing how culture, race, and ethnicity impacts the music teaching process. Participants' responses to item 12, however, that they know the meaning of multicultural education, were significantly different across United States geographic locations ($X^2 = 15.93$, $p = .043$). The null hypothesis that was tested via the Kruskal-Wallis Chi Square test was not retained for item 12, but was retained for items 11, and 13 through 17. An effect of geographic location on the magnitude of participants' knowledge of multicultural education's definition exists. Table 11 displays the X^2 statistics and asymptotic significance level for SCRT items 11 through 17.

Table 11. X^2 Values and Asymp. Sig. for SCRT Knowledge Grouped by U.S. Geographic Location

Item	X^2	**Deg. Of Freedom**	**Asymp. Sig.**
11	8.23	8	.411
12	15.93	8	.043
13	15.01	8	.059
14	6.45	8	.597
15	8.76	8	.363
16	5.92	8	.657
17	4.43	8	.817

Note: Grouping Variable: Regions of the country subjects primarily grew up?

Subsequently, pairwise comparisons were performed using Dunn's procedure with a Bonferonni correction to control Type I error rate due to multiple comparisons. The post hoc analysis did not reveal significant differences in participants' SCRT responses for item 12 across all pairwise comparisons. Pairwise comparisons across geographic regions in the United States for item 12 are shown in Appendix B. Although post-hoc pairwise comparisons did not reveal significant differences when the Bonferroni correction was applied, the geographic region that contributed most to the differences in participants' responses to item 12 can be interpreted.

Prior to application of the Bonferonni correction, seven pairs of geographic regions were significantly different, East South Central and East North Central (p = .029), East South Central and South Atlantic (p = .016), East South Central and West South Central (p = .021), East South Central and Pacific (p = .008), New England and South Atlantic (p = .042), New England and Pacific (p = .021), Mountain and Pacific (p = .036), and West North Central and Pacific (p = .049). The East South Central region contributed to four of the seven significantly different pairwise comparisons, and the Pacific region contributed to five of the seven significantly different pairwise comparisons. The comparison that included both of these regions was most significant across all pairwise comparisons (p = .008).

As part of an exploratory investigation by which a future research study may be designed, the researcher conducted a second analysis of the current study's data. Two oneway analyses of variance (ANOVA) were conducted to determine the effect of geographic location on participant's use and participants' knowledge of culturally

responsive teaching approaches. To meet one of the assumptions of the ANOVA, the data collected from the SCRT was converted from ordinal measure to interval measurement. The data conversion was completed by summing each participants' item responses to create a scale of 40 possible points for the *Usage* construct and 35 possible points for the *Knowledge* construct, rather than the original five possible points for each item.

A oneway ANOVA was conducted to determine if an effect of geographic location on SCRT responses within the *Usage* construct existed. Table 12 includes the results of the oneway ANOVA of the effect of geographic location on participants' use of culturally responsive teaching. Results revealed no significant differences across the nine levels of geographic region (p = .669).

Table 12. ANOVA Results for SCRT Usage Responses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	145.121	8	18.140	.725	.669
Within Groups	4028.555	161	25.022		
Total	4173.676	169			

An additional ANOVA was conducted to determine the effect of geographic location on participants' knowledge of culturally responsive teaching. Table 13 includes the results of the oneway ANOVA of the effect of geographic location on participants' knowledge of culturally responsive teaching. Results revealed a significant difference between participants' responses to the SCRT Knowledge construct across the nine geographic regions (p = .048). Tukey post hoc analyses revealed no significant difference between the pairwise comparisons of geographic location. The difference between

participants' responses to the SCRT Knowledge construct, however, were greatest between participants from the East North Central region and the Mountain region (p = .062).

Table 13. ANOVA Results for SCRT Knowledge Responses

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	157.115	8	19.639	2.012	.048
Within Groups	1571.732	161	9.762		
Total	1728.847	169			

The Kruskal-Wallis test was conducted using data measured at the ordinal level for each SCRT item, while the one-way ANOVA was conducted using composite data measuring both the use and knowledge constructs. The low statistical power (.101) of the one-way ANOVA determined by using G*Power®, further confounded accurate interpretation of the results. The unequal and small group sample size contributed to the low power of the oneway ANOVA. Additional research using equal and large sample sizes likely would increase the power of the oneway ANOVA, thereby increasing the accuracy of the interpretation of the results.

Analysis of Research Question Five

Research Question Five was written as follows. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching usage ($p \leq .05$)? Items 3 through 10 measured the extent to which participants' (n = 170) used culturally responsive teaching approaches in their classrooms. Controlling for grade

level taught, a Kruskal-Wallis test was used to analyze participants' SCRT responses to items 3 through 10 as the dependent variable that represented participants' amount of culturally responsive teaching approaches used, such as, including rubrics for assignments, examining musical selections for culturally accurate themes, and learning about the cultures of students. The grade level in which participants' taught (middle or high school teaching) served as the independent variable within the analysis. Results of the Kruskal-Wallis test revealed no significant differences in participants' selections to items 3 through 10 on the SCRT across grade level groupings. Table 14 shows X^2 values and asymptotic significance levels for items 3 through 10 across participants' grade level.

Table 14. X^2 Values and Asymp. Sig. Levels of SCRT Usage Across Grade Level

	Items							
	3	**4**	**5**	**6**	**7**	**8**	**9**	**10**
X^2	.976	1.669	.236	.061	2.620	.425	.163	.256
Asymp. Sig.	.323	.196	.627	.804	.106	.515	.686	.613

Note: Grouping Variable: Grade-level Taught

Analysis of Research Question Six

Research Question Six was written as follows. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching knowledge ($p \leq .05$)? A Kruskal-Wallis test was used to analyze participants' (n =170) responses to items 11 through 17 across grade level, which comprised the *Knowledge* construct of the SCRT and included items related to understanding how culture impacts music teaching, the meaning of multicultural education and culturally responsive teaching, and understanding how to include culturally responsive teaching in lessons.

Within the analysis, participants' responses to items 11 through 17 served as the dependent variable and grade level taught functioned as the independent variable. Results of the Kruskal-Wallis test revealed no significant difference between mean ranks of participants' responses to items 11 through 17 across grade level. Table 15 shows Chi Square values and asymptotic significance levels of participants' responses to items 11 through 17 across grade level.

Table 15. X^2 Values and Asymp. Sig. Levels of SCRT Knowledge Across Grade Level

	Items						
	11	**12**	**13**	**14**	**15**	**16**	**17**
$\boldsymbol{X^2}$	.065	.480	.063	.785	.462	1.395	.208
Asymp. Sig.	.799	.488	.801	.376	.497	.238	.648

Note: Grouping Variable: Grade Level

Analysis of Research Question Seven

Research Question Seven was written as follows. Is there a statistically significant effect of ensemble type (band or orchestra) on culturally responsive teaching usage ($p \leq .05$)? A Kruskal-Wallis test was used to analyze participants' (n =170) responses to items 3 through 10 across ensemble type, which comprised the *Usage* construct of the SCRT and included items designed to measure the extent to which participants used culturally responsive teaching approaches such as learning words in other languages, learning about the cultures of students, and asking for student input when lesson planning. Within the analysis, participants' responses to items 3 through 10 served as the dependent variable and instrumental ensemble taught by participants functioned as the independent variable. Results of the Kruskal-Wallis test revealed no significant differences between mean ranks

of participants' responses to items 3 through 10 across ensemble type. Table 16 shows Chi Square values and asymptotic significance levels of participants' responses to items 3 through 10 across the ensemble type variable.

Table 16. X^2 Values and Asymp. Sig. Levels of SCRT Usage Across Ensemble Type

	Items							
	3	**4**	**5**	**6**	**7**	**8**	**9**	**10**
$\boldsymbol{X^2}$	.684	.106	.855	.168	.332	.939	.199	.423
Asymp. Sig.	.408	.745	.355	.682	.564	.332	.655	.516

Note: Grouping Variable: Ensemble type

Analysis of Research Question Eight

Research Question Eight was written as follows. Is there a statistically significant effect of ensemble type (band or orchestra) on culturally responsive teaching knowledge and ($p \leq .05$)? A Kruskal-Wallis test was used to analyze participants' (n =170) responses to items 11 through 17 across ensemble type, which included SCRT items related to the importance of instructing students in the music of different racial and ethnic groups, understanding how culture influences students' music learning, and understanding the cultural qualities of various social groups. Within the analysis, participants' responses to items 11 through 17 served as the dependent variable and instrumental ensemble taught by participants functioned as the independent variable. Results of the Kruskal-Wallis test revealed no significant differences between mean ranks of participants' responses to items 7 through 11 across ensemble type. Table 17 shows Chi Square values and asymptotic significance levels of participants' responses to items 11 through 17 across the ensemble type variable.

Table 17. X^2 Values and Asymp. Sig. Levels of SCRT Knowledge Across Ensemble Type

	SCRT Items						
	11	**12**	**13**	**14**	**15**	**16**	**17**
$\boldsymbol{X^2}$	1.656	.002	.471	.053	.453	.000	.018
Sig.	.198	.962	.492	.818	.501	.986	.893

Note: Grouping Variable: Ensemble type

Summary

The first research question of the current study examined whether instrumental music educators used culturally responsive teaching approaches in their lessons. Descriptive statistics were used to analyze means, medians, standard deviations, and response frequencies. An examination of the mean percentage of the positive item choices (*Usually* and *Always*) for survey items 3 through 10 revealed that typically, most participants used culturally responsive teaching approaches consistently. The total number of participants who chose either *Usually* or *Always* across items 3 through 10 was 96 participants, representing 56.47% of all participants' responses to the SCRT items 3 through 10. The percentage of participants selecting *Usually* or *Always* across items 3 through 10 was 56.47 (n = 96), which was the percentage of participants that used culturally responsive teaching approaches consistently.

Research Question Two examined the extent to which instrumental music educators knew about culturally responsive teaching concepts. Similarly to the analysis performed for Research Question One, descriptive statistics were used to determine means, standard deviations, and frequency and associated percentage of participants' responses to the SCRT items. An examination of the mean percentage of the positive

item choices (*Somewhat Agree* and *Strongly Agree*) for survey items 11 through 17 maintained that on average, the majority of participants are familiar with culturally responsive teaching concepts. Percentage means for items 11 through 17 were computed for each qualifier and the positive qualifiers were combined into a group labeled *Knowledge* (*Somewhat Agree and Agree*). The mean percentage of the *Knowledge* group was 70.67 ($N = 170$), indicating that 70.67% of participants were knowledgeable about culturally responsive teaching concepts.

Research Question Three examined whether there was a statistically significant effect of participants' geographic region in the United States on culturally responsive teaching usage. A Kruskal-Wallis test was run to determine differences in rank means for participants' selections to items 3 through 10. Results of the Kruskal-Wallis test revealed that participants' responses to SCRT items 3 through 10 were not affected significantly by geographic location. In other words, the null hypothesis that was tested via the Kruskal-Wallis Chi Square test was retained. There were no statistically significant differences between the frequency of participants' responses to the SCRT items 3 through 10 when grouped by geographic locations of the United States ($p > .05$).

Research Question Four examined whether there was a statistically significant effect of participants' geographic region in the United States on culturally responsive teaching knowledge and beliefs. A Kruskal-Wallis test was run to determine differences in rank means for participants' selections to items 11 through 17 across United States geographic regions. Results of the Kruskal-Wallis test revealed that participants' SCRT selections to items 11, and 13 through 17 were not significantly different when grouped

by geographic locations of the United States. Participants' responses to item 12 however, were significantly different across United States geographic regions (X^2 = 15.93, p = .043). The null hypothesis that was tested via the Kruskal-Wallis Chi Square test was not retained for item 12, but was retained for items 11, and 13 through 17. While the results of the Kruskal-Wallis test revealed an effect of geographic location on the magnitude of participants' knowledge of multicultural education's definition, post hoc testing revealed that the East South Central and Pacific regions contributed most to the significant differences in responses to item 12.

Research Question Five examined whether a significant effect of grade level in which participants' taught on culturally responsive teaching usage existed. The independent variable contained two groups, participants that taught middle school, and participants that taught high school. A Kruskal-Wallis test was run to determine whether differences existed in rank mean percentages of participants' selections for SCRT items 3 through 10. Results of the Kruskal-Wallis test revealed no significant differences in participants' selections to items 3 through 10 on the SCRT across grade level groupings.

Research Question Six examined whether a significant effect of grade level in which participants' taught on culturally responsive teaching knowledge and beliefs existed. Similar to the independent variable included in the analysis for Research Question Five, the independent variable for Research Question Six's analysis contained two groups, participants that taught middle school, and participants that taught high school. A Kruskal-Wallis test was run to determine whether differences existed in rank mean percentages of participants' selections for SCRT items 11 through 17. Results of

the Kruskal-Wallis test revealed no significant differences in participants' selections to items 11 through 17 on the SCRT across grade level groupings.

Research Question Seven examined whether a significant effect of participants' instrumental ensemble type on culturally responsive teaching usage existed. The independent variable contained two groups, participants that taught band, and participants that taught orchestra. A Kruskal-Wallis test was run to determine whether differences existed in rank mean percentages of participants' selections for SCRT items 3 through 10. Results of the Kruskal-Wallis test revealed no significant differences in participants' selections to items 3 through 10 on the SCRT across ensemble groupings.

Research Question Eight examined whether a significant effect of participants' instrumental ensemble type on culturally responsive teaching knowledge and beliefs existed. The independent variable included in the analysis for Research Question Eight was the same as the independent variable for Research Question Seven's analysis, participants that taught band, and participants that taught orchestra. A Kruskal-Wallis test was run to determine whether differences existed in rank mean percentages of participants' selections for SCRT items 11 through 17, and revealed no significant differences in participants' selections to items 11 through 17 on the SCRT across ensemble groupings.

CHAPTER V

SUMMARY AND CONCLUSIONS

The purpose of the current study was to determine the extent to which secondary school instrumental music educators use culturally responsive teaching approaches and to determine their level of knowledge regarding culturally responsive teaching concepts. A secondary purpose was to determine whether there are significant differences in culturally responsive teaching usage and knowledge among instrumental music educators based on their geographic location, the grade level they teach (middle or high school), and ensemble type they teach (band or orchestra). As related to the current study, therefore, the researcher investigated answers to the following research questions.

1. What percentage of U.S. band and orchestra educators consistently use culturally responsive teaching?
2. What percentage of U.S. band and orchestra educators are knowledgeable of culturally responsive teaching concepts?
3. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching usage ($p \leq .05$)?
4. Is there a statistically significant effect of teacher geographical location on culturally responsive teaching knowledge ($p \leq .05$)?
5. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching usage ($p \leq .05$)?
6. Is there a statistically significant effect of grade level taught (middle or high school) on culturally responsive teaching knowledge ($p \leq .05$)?

7. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching usage ($p \leq .05$)?

8. Is there a statistically significant effect of instrumental ensemble type (band or orchestra) on culturally responsive teaching knowledge ($p \leq .05$)?

By the early 1990s, acknowledgement of student cultural diversity in classrooms became standard practice in the United States (Grant & Millar, 1992). Schools were becoming increasingly diverse, and multicultural education, of which culturally responsive teaching is a part, was seen as way of eliminating the misunderstandings and inequalities that occur in stratified societies (Marrett et al., 1992). The original purpose of culturally responsive teaching was to advance the academic achievement of African American students (Ladson-Billings, 1995a), but has since been applied to educating students of varying races and ethnicities.

While culturally responsive teaching was conceived as an approach to educating students across all aspects of teaching, music education researchers studied the manner in which culturally responsive teaching approaches may be used in music classes (Abril, 2013; Bond, 2014; Bond & Russell, 2019; Lind & McKoy, 2016; & McKoy, Macleod, Walter, & Nolker, 2017). Music educators' perceptions of culturally responsive teaching were examined as well (Bond & Russell, 2019; Salvador & Kelly-McHale, 2017; Shaw, 2016). Most music education studies examined for the current study were based on the idea that music educators could apply culturally responsive teaching approaches if given information to meet that end.

As previously mentioned, several music education studies examined the manner in which music educators might become culturally responsive in their teaching. A limited

number of studies, however, examined the frequency of culturally responsive teaching approaches used in classrooms (Rhodes, 2013; Siwatu, 2009). The researchers however, did not investigate the extent to which culturally responsive teaching approaches were used in music classrooms. The current study addressed a gap in the literature, which was a specific need to study culturally responsive teaching usage in instrumental music classrooms.

Summary of Results

Demographics of Participants

The pilot survey was administered to public school band and orchestra educators working in secondary schools in central North Carolina (N = 31). The final survey was administered to a sample of 10,864 participants. One hundred seventy (n = 170) completed and returned the *Survey of Culturally Responsive Teaching* (SCRT). Each of the nine United States geographical regions associated with Research Questions One and Two were represented. Each grade level (i.e., middle and high school) and ensemble type (i.e., band and orchestra) associated with Research Questions Three through Eight were also represented in the 170 responding participants.

Research Question One

The purpose of Research Question One was to determine the percentage of secondary instrumental music educators who consistently used culturally responsive teaching approaches in their classrooms. Descriptive statistics were used to determine the means, standard deviations, response frequencies, and response percentages of participants' responses to items 3 through 10 of the SCRT. Specific tasks demonstrated

by culturally responsive educators contained within the design of items 3 through 10 included providing rubrics and progress reports to students, learning about students' families and backgrounds, and tailoring music instruction to the needs of all students. A grand mean was determined for the items within the *Usage* construct (*GM* = 3.61). Results of this analysis revealed that most participants used culturally responsive teaching approaches. To confirm this result, the grand median was also computed (*Gmd* = 4.00), indicating that the distribution of participants' responses to items 3 through 10 was negatively skewed. Because the distribution of participants' responses to items 3 through 10 was negatively skewed, an investigation of the percentage of participants that selected a qualifier in the *Consistent* grouping (*Usually* or *Always*) was warranted.

To most explicitly answer Research Question One, a percentage of instrumental music educators that consistently used culturally responsive teaching approaches was needed. The grand mean (*GM* = 3.61) and grand median (*GMed*. = 4.00) of the *Usage* construct confirmed that greater than 50% of participants used culturally responsive teaching approaches in their classrooms, but did not indicate the exact percentage. To confirm the exact percentage, the percentages of the combined *Usually* (32.35) and *Always* (24.26) qualifiers were calculated. The result of this calculation revealed that 56.62% of participants used culturally responsive teaching approaches consistently.

Research Question Two

The purpose of Research Question Two was to determine the percentage of U.S. public secondary school instrumental music educators that have knowledge of culturally responsive teaching concepts. *SCRT* items 11 through 17 comprised the *Knowledge*

construct, and was developed to answer Research Question Two. Items 11 through 17 included concepts such as the meaning of multicultural education and culturally responsive teaching; understanding how culture impacts students' learning; and understanding how culture, race, and ethnicity influence music teaching. The data analysis method related to Research Question Two was almost exactly the same as the methods used to answer research question one. Means, standard deviations, response frequencies, and response percentages were calculated for SCRT items 11 through 17. From the individual item means, a grand mean was computed for the *Knowledge* construct (*GM* = 3.67), which indicated that the average of responses lied in the positive scale range. A grand median (*GMd* = 4.00) was also computed for responses to items 11 through 17, revealing that the distribution of participants' responses to items 11 through 17 was negatively skewed. Because the distribution of participants' responses to items 11 through 17 was negatively skewed, an investigation of the percentage of participants that selected a qualifier in the *Knowledge* grouping (*Somewhat Agree* or *Strongly Agree*) was warranted.

Percentage means were calculated for each item and combined into a group labeled *Knowledge*, which contained item selections *Somewhat Agree* and *Strongly Agree.* The percentage of participants that selected either *Somewhat Agree* or *Strongly Agree* group was 70.67, which indicated that 70.67% of participants were knowledgeable about culturally responsive teaching concepts.

Research Question Three

The purpose of Research Question Three was to investigate whether a statistically significant effect of geographic location on culturally responsive teaching usage exists. Results of a Kruskal-Wallis test revealed that participants' responses to SCRT items 3 through 10 were not affected significantly by geographic location. The null hypothesis that was tested via the Kruskal-Wallis Chi Square test was retained. There were no significant differences between the frequencies of participants' responses to the SCRT items 3 through 10 when grouped by geographic locations of the United States ($p > .05$).

Research Question Four

The purpose of Research Question Four was to investigate whether a statistically significant effect of geographic location on culturally responsive teaching knowledge exists. Results of a Kruskal-Wallis test revealed that participants' SCRT selections to items 11 and 13 through 17 were not significantly different when grouped by geographic locations of the United States. Participants' responses to item 12, however, were significantly different across United States geographic locations ($X^2 = 15.93$, $p = .043$). The null hypothesis that was tested via the Kruskal-Wallis Chi Square test was not retained for item 12, but was retained for items 11, and 13 through 17.

Pairwise comparisons were performed using Dunn's procedure with a Bonferonni correction to control Type I error rate due to multiple comparisons. While the results of the Kruskal-Wallis test revealed a significant effect of geographic location on the magnitude of participants' knowledge of the definition of multicultural education, post hoc testing did not reveal a statistically significant difference between any pairwise

geographic region following the Bonferroni correction. Several pairwise comparisons were significantly different prior to the Bonferroni comparison, however, with the East South Central and Pacific pair contributing most to the overall difference (p = .008).

Research Question Five

Research Question Five's purpose was to examine whether there existed a statistically significant effect of grade level taught on culturally responsive teaching usage. The independent variable contained two groups, participants that taught middle school, and participants that taught high school. A Kruskal-Wallis test was run to determine whether differences existed in rank mean percentages of participants' selections for SCRT items 3 through 10 grouped by grade level. Results of the Kruskal-Wallis test revealed no significant differences in participants' selections to items 3 through 10 on the SCRT across grade level groupings.

Research Question Six

Research Question Six was developed to determine whether a significant effect of grade level on magnitude of culturally responsive teaching knowledge existed. A Kruskal-Wallis test was run to determine whether significant differences existed in rank mean percentages of participants' selections for SCRT items 11 through 17 grouped by grade level. Results of the Kruskal-Wallis test revealed no significant differences in participants' selections to items 3 through 10 on the SCRT across grade level groupings. The grade level in which participants taught did not affect participants' selections to items 11 through 17.

Research Question Seven

Research Question Seven was developed to discover whether there was a statistically significant effect of instrumental ensemble type on culturally responsive teaching usage. The independent variable used in the analysis for Research Question Seven was instrumental ensemble type (band or orchestra). A Kruskal-Wallis test was run to determine whether significant differences existed in rank mean percentages of participants' selections for SCRT items 3 through 10 grouped by instrumental ensemble type. Results of the Kruskal-Wallis test revealed no significant differences in participants' selections to items 3 through 10 on the SCRT across grade level groupings. The type of instrumental ensemble taught by participants did not affect participants' selections to items 3 through 10.

Research Question Eight

Research Question Eight was developed to discover whether there was a statistically significant effect of instrumental ensemble type on culturally responsive teaching knowledge. The independent variable used in the analysis for Research Question Eight was instrumental ensemble type. A Kruskal-Wallis test was run to determine whether significant differences existed in rank mean percentages of participants' selections for SCRT items 11 through 17, which measured participants' knowledge of culturally responsive teaching concepts, grouped by instrumental ensemble type. Results of the Kruskal-Wallis test revealed no significant differences in participants' selections to items 11 through 17 on the SCRT across grade level groupings. The type of instrumental

ensemble taught by participants did not affect participants' selections to items 11 through 17.

Research Conclusions

The primary purpose of the current study was to investigate the percentage of secondary school instrumental music educators that use culturally responsive teaching approaches in their classrooms, as well as to identify the percentage of the same educators that are knowledgeable about culturally responsive teaching concepts. Based on results of statistical analyses of the current study's survey data, several conclusions may be drawn. Answers to Research Questions One and Two indicated that based on the sample drawn to complete the survey, more participants knew about culturally responsive teaching concepts than participants that consistently used culturally responsive teaching approaches in their classrooms. A difference existed between those that only knew about culturally responsive teaching concepts and those that applied them.

Reasons exist for the disparity between those instrumental music educators who know about and understand culturally responsive teaching concepts and instrumental music educators who use that knowledge to teach in a culturally responsive manner. Item 14 of the SCRT addressed the aforementioned disparity by asking if participants know how to apply their culturally responsive teaching knowledge. Approximately 41% of participants indicated that they understand culturally responsive teaching, but do not know how to incorporate it in their teaching. If participants' choices of *Neither Agree nor Disagree* are included in this analysis, the percentage of participants who understand culturally responsive teaching, but do not know how to incorporate it in their classroom is

65.88%. This finding is consistent with Volk's (1991) and McClellan's (2002) findings that instrumental music educators often have difficulty incorporating culturally responsive teaching approaches in their classrooms.

Responses to item 13 may provide additional evidence that instrumental music educators know about culturally responsive teaching, even if they do not implement it. Item 13 asked participants to respond to a statement about whether they knew what culturally responsive teaching meant. Approximately 83% of participants indicated that they either agreed or strongly agreed with the statement, which is consistent with Bonner, Warren, and Jiang (2018). Once again, results of the current study supported the premise that a large majority of instrumental music educators (65.88%-83%) know about culturally responsive teaching concepts, even though they may not use this knowledge in their daily teaching. One possible reason for the difference in the percentage of participants that indicated they knew about culturally responsive teaching and those participants that used culturally responsive teaching is that perhaps participants know about culturally responsive teaching but they do not understand it and therefore, have difficulty using it.

Findings of the current study suggested that while music teacher preparation programs focused on becoming a culturally responsive teacher exist, such programs are designed primarily to provide knowledge and ideas. The practical implementation, however, seems to be lacking in many schools. Culturally responsive teaching knowledge must be applied in classrooms to increase student learning (Gordon & Espinoza, 2020). Results of the current study support the premise that preparation programs focused on

becoming culturally responsive educators are effective in conveying knowledge, but not necessarily effective in facilitating music educators' use of culturally responsive teaching in their classrooms. Methods or strategies to ensure that practicing educators use culturally responsive teaching approaches are warranted. This finding is consistent with Barnes and McCallops (2019) conclusion that educators desire school-wide goals that lead to cultural responsiveness.

Another possibility for the difference in participants that implemented culturally responsive teaching practices and participants that know about culturally responsive concepts is the traditional nature of not only instrumental music teaching, but teaching in general. Some general education teachers teach in the manner in which they were taught as students (Hopper, 2000). Through observation of their own educators, students formed thoughts of their future teaching by developing ideas regarding the educator's role in the classroom, forming beliefs regarding effective teaching practices, and acquiring a collection of strategies and scripts for future use (Ball, 1988). In a study conducted by Oleson and Hora (2014), participants reflected on the pedagogical techniques their educators demonstrated, which became the participants' primary source of their own teaching-related knowledge. Results of this study supported the belief that educators, "teach the way they were taught" (p.37), though the researchers explicitly stated that teacher imitation is not the only factor shaping current teaching practice.

Instrumental music educators may also teach their classes similarly to how they were taught, especially beginning instrumental music educators and pre-service educators. Some instrumental music pre-service educators may imitate their former band

or orchestra educators to the point where they may be unwilling to adopt a point of view that counters their prior experience as a student member of an instrumental music ensemble, especially if their experience was highly positive (Allsup & Benedict, 2008). One of the more challenging experiences that undergraduate music education students and pre-service music educators endure is the struggle to resolve the conflict between what they learn in their college and university music education courses and what they think they already know (Conway, 2010). Clearly, music educators often retain the teaching practices and ideas observed as a student, and those practices and ideas impact their own music teaching. A reasonable assumption can be made that if an instrumental music educator's former band or orchestra director did not apply culturally responsive teaching, then culturally responsive teaching may be viewed negatively, or perhaps with indifference, and thus not applied.

If current instrumental music educators remain conflicted between that which they knew or experienced prior to beginning their teaching career and concepts in which they've been exposed while teaching, they may feel reluctant to adopt new modes of teaching, which may partially explain the current study's results. The current study revealed that some instrumental music educators did not know how to incorporate their knowledge of culturally responsive teaching concepts, but some instrumental music educators may have chosen not to incorporate that knowledge into their teaching practices because of a belief system rather than a feeling of incompetence.

Another possible explanation for the disparity between those instrumental music educators that practice culturally responsive teaching and those that only know about

culturally responsive teaching, is the educator's age, coupled with years of teaching experience. As of the 2017-2018 school year, 23% of educators in public elementary and secondary schools had more than twenty years of teaching experience. Educators in this later stage of their careers often have difficulties managing the challenges of aging, such as waning energy or developing interests and obligations outside the school setting, and are reluctant to welcome school-wide change (Hargreaves, 2005). Other educators may resent change in their schools, especially since they may be ill-prepared for change (Evans, 2000). Becoming a culturally responsive educator after twenty or more years of teaching may be challenging for some educators, especially if large-scale changes elicit negative emotions in them. For some late-career educators, the challenge may not be worth the effort to them, especially if they are exploring teaching positions that allow them to transition into retirement with little unwanted school reform (Hargreaves, 2005).

Gender may be a factor in the difference between the percentage of participants that incorporate culturally responsive teaching and participants that only know about it. According to the National Center for Education Statistics (2020), as of the 2017-2018 school year, 64% of all United States secondary school educators were female and 36% were male. Although a majority percentage of total U.S. public school educators are female, the opposite is true for instrumental music ensemble educators. Band and orchestra directors are predominantly male. Sheldon and Hartley (2012) found that 72% of conducting students from 1999-2008 were male and 28% were female. Also, during the 2000s, 106 of 128 (82.81%) band and orchestra conductors in performance at the Midwest Band and Orchestra Clinic were male (Sheldon & Hartley, 2012).

Male educators may be apprehensive regarding implementing a new program, such as a school-wide culturally responsive teaching initiative. Brookhart and Loadman (1996) found that male educators reported lower expectations of the efficacy of preparation programs that were designed to increase educator knowledge and teaching skills. The current study did not include an item that asked participants to identify their gender, but if the study's sample is representative of the participants from Sheldon and Hartley's (2012) study, then the majority of participants in the current study is likely mostly male. Perhaps the current study's participants are reflective of the male educators in Brookhart and Loadman's (1996) study and they do not hold a positive opinion on whether a new initiative, such as culturally responsive teaching, would be effective, which may explain the difference in percentages of participants who consistently applied culturally responsive teaching and participants who knew about culturally responsive teaching but did not apply it.

As investigated in the current study, geographic location in which instrumental music educators were reared did not decidedly affect their use of culturally responsive teaching approaches, but did have an effect on their knowledge of culturally responsive teaching concepts, namely the definition of *multicultural education*. This finding was somewhat surprising, but also encouraging. The teaching force has become less ethnically and racially diverse (Ingersoll, 2015), and multiculturalism remains controversial (Lentin & Titley, 2011). As a researcher, expecting that geography possibly affects educators' application of culturally responsive teaching was warranted in the current study, especially when one considers that throughout history racism in the United

States has and continues to exist. The encouraging characteristic of this finding is that there appears to be no region-specific deficit in culturally responsive teaching usage, even though some instrumental music educators may not understand the concept of multicultural education.

Different regions of the United States have a history of racism directed towards specific groups of people, such as the treatment of African Americans in the southern states during the civil rights movement of the 1960s, or the influx of Irish immigrants in the Northeastern states during the 1800s. The fact that racism in the United States is an ongoing issue suggests that current educators from various United States geographic regions may be influenced by the beliefs of significant others. Educators, however, are mostly White and educated (Martinez, 2018) and are largely supportive of racial integration (Frankenberg, 2010). These characteristics, in turn, suggests support of multicultural education, of which culturally responsive teaching is a part. As well, educators with positive multicultural beliefs tend to engage in culturally responsive teaching more frequently than educators who do not have positive multicultural beliefs (Abacioglu et al., 2020). The encouraging aspect of the finding that no significant effect of geographic location on culturally responsive teaching usage exists is that there appears to be no region-specific deficit in culturally responsive teaching usage, at least as measured within the current study. The lack of knowledge regarding the definition of multicultural education seems to not impact the amount of culturally responsive usage among instrumental music educators.

Research Questions Five through Eight focused on whether grade level taught, and instrumental ensemble taught, such as middle or high school, and band or orchestra taught, respectively, affected instrumental music educators' usage and knowledge of culturally responsive teaching behaviors. Conceivably, the different traditions of band and orchestra may suggest a different type of teacher with different cultural beliefs. Additionally, varying types of professional development related to culturally responsive teaching may be dependent on whether one teaches middle or high school. If such differences occurred in the teaching profession, they were not evident in the current study's results. For Research Questions Five through Eight, there were no significant effects of grade level taught, nor instrumental ensemble type taught, on usage and knowledge of culturally responsive teaching of the instrumental music educators who participated in the current study.

Limitations

Participants

Participants of the current study were U.S. secondary school instrumental music educators who were members of the National Association of Music Education (NAfME). As of the 2016-2017 school year, there were 23,814 public secondary schools in the United States ("Fast Facts: Educational Institutions", n.d.). The Give-a-Note Foundation estimated that 90.91% of all U.S. schools employed at least one music educator (Give-a-Note Foundation, 2017), which suggests that approximately 21,649 secondary schools employed at least one music educator. The sample for the current study was selected from a population of 19,984 NAfME members who were also instrumental music

educators. The difference in approximate number of secondary school music educators and the population of the current study was 1,665 educators. Those instrumental music educators who were not NAfME members were unable to participate in the current study.

The purpose of the current study was to investigate culturally responsive teaching knowledge and usage among public secondary school instrumental music educators in the United States. The decision to use NAfME's Research Assistance Program in the sampling process was one of convenience due to time and cost restraints, not because that specific population was meaningful to the research questions. A sample selected from a population that included all instrumental music educators in the United States may have most accurately answered the current study's research question. Instead, coverage bias was introduced into the results and conclusion of the current study because of the difference in the selected sample and the total population.

The choice to use only two demographic questions may also have limited the scope of the study. Item 2 asked only whether participants taught middle or high school, and band or orchestra, rather than whether any participant taught combinations of these grade levels and ensemble types. Revision to the current study's survey should include options for those music educators that taught middle and high school band, middle and high school orchestra, middle school band and orchestra, high school band and orchestra, or a combination of each choice, middle and high school band and orchestra. Some participants may have chosen to not complete the survey because their grade-level type and ensemble type were not accurately depicted in the item choices for item 2.

Response Rate

The current study's response rate was very low at only 1.62%. The survey was administered to 10,864 instrumental music educators who were members of NAfME. The survey was opened by 3,183 participants. Of participants who opened the survey email, 141 potential participants explored the survey, but did not complete it. Three hundred sixty-one survey emails (n = 361) were returned immediately due to email address problems, and 7,320 survey emails were not opened. A second administration of the survey was initiated one week following the first administration with similar results. Forty-two (n =42) participants submitted incomplete survey responses and were discarded, leaving a final sample of 170. The final survey response rate was 1.62%. Due to the low response rate, results of the current study cannot be generalized to the target population.

The low response rate may be attributed to several reasons. First, the survey was administered via email and several emails were returned due to problems with the email addresses such as incomplete, changed, or invalid email addresses. The percentage of immediately returned email addresses is often high with web-based surveys (Vehovar et al., 2002). For the current study, however, the percentage of immediately returned emails was relatively low at 3.32%. Though the percentage of undeliverable emails was low, if those emails had been functional, the response rate would have likely been higher.

Second, response rate may have been affected by the administration time period. The second survey was administered one week following the initial survey as a reminder to complete it. While the reminder survey certainly increased the number of participants

who opened the survey (2,686 opened the second survey), the short time span between administrations may have caused some nonresponse since potential participants actually may not have been contacted during that short time period (Fowler, Jr., 2002). Lengthening the time period between administrations may have increased the response rate, but there is no way to be sure, as related to the current study.

Repeated follow-up administrations may have increased the response rate. Babbie (1990) suggests three administrations spaced two or three weeks apart. The three administrations that Babbie maintains increases the response rate are the original administration and two follow-up administrations. The current study used two survey administrations (i.e., an original and one follow-up) spaced one week apart. A request for additional follow-up administrations was made to the NAfME Survey Assistance program, but at the time, their policy was to administer the survey only twice.

Third, altering the survey type may have increased the response rate. Email and web-based surveys are beneficial when trying to save time because they allow for the use of much larger samples (Sapsford, 2007); however, they also lack personalized attention. Although each survey administration type has its drawbacks, telephone or face-to-face interviewing may have increased the response rate of the current study's survey (McBurney, 2001). Since the current survey was administered nation-wide to more than 10,000 participants, telephone or face-to-face interviewing would not have been feasible.

Item Nonresponse

Responses to the current study's survey included nonresponse to individual items, that may have affected the results of the survey (Fowler, Jr., 2002). Several participants

completed only a portion of the survey and some completed only the items related to participant demographics. Item nonresponse may be due to a reluctance to respond to sensitive items (Bethlehem et al., 2011) or poor item design (Tourangeau et al., 2013). An attempt to limit item nonresponse was made by using a pilot survey so that sensitive or poorly worded items may be amended or limited. Item nonresponse can profoundly affect results if only completed cases are used in data analysis (Yan & Curtin, 2010). To limit the effects of item nonresponse, incomplete surveys were discarded.

Suggestions for Future Research

The current research study was designed to investigate the extent to which culturally responsive teaching approaches are used by instrumental music educators, and to discern how many instrumental music educators possess knowledge regarding culturally responsive teaching concepts. Additionally, the effects of geographic location, grade level taught, and instrumental ensemble type taught on instrumental music educators' usage and knowledge of culturally responsive teaching approaches were investigated. Participants for the current study were public secondary school instrumental music educators who were members of NAfME. Upon completion of this study, the researcher reflected upon questions that remained unanswered, and new questions and problems to pursue as a result of the findings of the current study. The final section of this dissertation is devoted to the future research that evolved from this reflective process.

The absence of prior research on the number of music educators who use culturally responsive teaching approaches in their teaching warrants additional study. Expanding the current study to include all types of music educators, including choral,

general, and instrumental music educators would allow for a complete description of the amount of culturally responsive teaching occurring in music classes. If the ultimate goal of the music education profession is to provide a quality music education for every child, and if educating in a culturally responsive manner is a means to that end, then data related to the amount of culturally responsive teaching occurring in all music courses would be valuable. Data expanded beyond the scope of the current study would provide state and district-level administration the information needed to plan much needed professional development on implementing culturally responsive teaching concepts.

The sample selected to participate in the current study was limited to United States instrumental music educators who were members of NAfME. Recognized as a limitation, the sample may have introduced coverage bias within this study because the entire population of United States secondary school instrumental music educators was not included in the population, only those with NAfME memberships. Only secondary instrumental music educators in the United States with NAfME memberships were included as the population for the current study. Expanding the current study design to include every U.S. instrumental music educator would provide an accurate view of the current state of culturally responsive teaching usage in those specific classes.

The difference in the percentage of participants that consistently included culturally responsive teaching practices in their daily lessons and participants that knew about culturally responsive teaching, but did not apply their knowledge in the classroom warrants further study. Several possible reasons for the difference were discussed earlier in Chapter V, including educator age, experience level, and the traditional nature of

teacher preparation, but further research is warranted to determine if those variables affect responses on the *Survey of Culturally Responsive Teaching*. If barriers to implementing culturally responsive teaching approaches exist among instrumental music educators, an expansion of the current research is necessary to identify the nature of those barriers.

The current study was designed to investigate the current status of culturally responsive instrumental music instruction. While the purpose was to determine whether instrumental music educators know about and use culturally responsive teaching approaches consistently, the ultimate goal is to establish a means by which all students receive a quality music education. Rychly and Graves (2012) explained that culturally responsive teaching is a means for reaching the ultimate objective of multicultural education for all students. For this objective to be reached, educators must, to the best of their abilities, meet the needs of each student. Culturally responsive teaching is necessary to ensure this goal is met. State and local teacher preparation opportunities, increased funding for teaching supplies, and teacher mentoring programs may lead to an increase in effective culturally responsive music instruction. Findings of this study, including future research suggestions, will guide the process by which all music educators become culturally responsive, that will help facilitate effective and meaningful music education for ***all*** students.

REFERENCES

Abacioglu, C.S., Volman, M., & Fischer, A.H. (2020). Educators' multicultural attitudes and perspective taking abilities as factors in culturally responsive teaching. *British Journal of Educational Psychology, 90,* 736-752.

Abril, C.R. (2009). Responding to culture in the instrumental music programme: A teacher's journey. *Music Education Research, 11,* 77-91.

Abril, C.R. (2010). Opening spaces in the instrumental music classroom. In A.C. Clements (Ed.), *Alternative approaches in music education: Case studies from the field* (pp.9-17). Rowman & Littlefield Education.

Abril, C.R. (2013). Toward a more culturally responsive general music classroom. *General Music Today, 27*(1), 6-11.

Allsup, R.E. (2011). Popular music and classical musicians: Strategies and perspectives. *Music Educators Journal, 97*(3), 30-34.

Allsup, R.E., & Benedict, C. (2008). The problems of band: An inquiry into the future of music education. *Philosophy of Music Education Review, 16,* 156-173.

Babbie, E. (1990). *Survey research methods* (2nd ed.). Wadsworth Publishing Company.

Babbie, E. (2001). *The practice of social research.* Belmont, CA: Wadsworth.

Ball, D.B. (1988). Unlearning to teach mathematics. *For the Learning of Mathematics, 8*(1), 40-48.

Bandalos, D.L. (2018). *Measurement theory and applications for the social sciences.* The Guilford Press.

Banks, J.A. (1979). Shaping the future of multicultural education. *Journal of Negro Education, 48,* 237-252.

Barnes, T.N., & McCallops, K. (2019). Perceptions of culturally responsive pedagogy in teaching SEL. *Journal for Multicultural Education,* 13, 70-81.

Barrett, R.A. (1984). *Culture and conduct: An excursion in anthropology.* Belmont, CA: Wadsworth Publishing Company.

Baruch, Y., & Holton, B.C. (2008). Survey response rate levels and trends in organizational research. *Human Relations, 61,* 1139-1160.

Berkman, E.T., & Reise, S.P. (2012). *A conceptual guide to statistics using SPSS.* SAGE Publications.

Bethlehem, J.G., Cobben, F., & Schouten, B. (2011). *Handbook of nonresponse in household surveys.* John Wiley & Sons, Inc.

Blair, E., & Blair, J. (2015). *Applied survey sampling.* Thousand Oaks, CA: SAGE Publications.

Bond, V. L. (2014). Culturally responsive teaching in the choral classroom. *The Choral Journal, 55*(2), 8-15.

Bond, V.L., & Russell, J.A. (2019). Music teacher perspectives of and engagement with culturally responsive education. *Bulletin of the Council for Research in Music Education, 221,* 7-28.

Bonner, P.J., Warren, S.R., & Jiang, Y.H. (2018). Voices from urban classrooms: Educators'perceptions on instructing diverse students and using culturally responsive teaching. *Education and Urban Society, 50,* 697-726.

Brookhart, S.M., & Loadman, W.E. (1996). Characteristics of male elementary educators in the U.S.A., at teacher education program entry and exit. *Teaching & Teacher Education, 12,* 197-210.

Brysbaert, M. (2011). *Basic statistics for psychologists.* Palgrave MacMillan.

Butler, A., Lind, V.L., & McKoy, C.L. (2007). Equity and access in music education: Conceptualizing culture as barriers to and supports for music learning. *Music Education Research, 9,* 241-253.

Campbell, P.S., Connell, C., & Beegle, A. (2007). Adolescents' expressed meanings of music in and out of school. *Journal of Research in Music Education, 55,* 220-236.

Caucasian. (2020). In *Merriam-Webster.* Retrieved from https://www.merriam-webster.com/dictionary/Caucasian.

Chiu, C.L., Carrero, K.M., & Lusk, M.E. (2017). Culturally responsive writing instruction for secondary students with emotional and behavioral disorders. *Beyond Behavior, 26*(1), 28-35.

Colley, B.D. (2008). Culture, relevance, and instrumentation in the school music ensemble: Moving beyond the band-orchestra-chorus trilogy. In B.A. Roberts (ed.), *Sociological explorations: Proceedings of the 5th International Symposium on the Sociology of Music Education* (63-80). St. John's: Newfoundland: The Binder's Press.

Conway, C. (2010). Issues facing music teacher education in the 21st century: Developing leaders in the field. In H.F. Abeles & L.A. Custodero (Eds.), *Critical issues in music education: Contemporary Theory and Practice* (pp. 259-275). Oxford University Press.

Corp, A. (2017). Using culturally responsive stories in mathematics: Responses from the target audience. *School Science and Mathematics, 117*, 295-306.

Crano, W.D., & Brewer, M.B. *Principles and methods of social research.* Mahwah, NJ: Lawrence Erlbaum Associates.

Creswell, J.W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, CA: Sage Publications.

Davies, M., & Hughes, N. (2014). *Doing a successful research project: Using qualitative or quantitative methods* (2nd ed.). New York, NY: Palgrave MacMillan.

Definitions of Multicultural Education. (2020). Retrieved from https://www.nameorg.org/definitions_of_multicultural_e.php

Dillman, D.A., Smyth, J.D., & Christian, L.M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design approach* (4th ed.). Hoboken, NJ: John Wiley & Sons, Inc.

Escalante, S.I. (2019). Latinx students and secondary music education in the United States. *Update, 37*(3), 5-11.

Evans, L. (2000). The effects of educational change on morale, job satisfaction and motivation. *Journal of Educational Change, 1*, 173-192.

Fordham, S. (1988). Racelessness as a factor in Black students' school success: Pragmatic strategy or Pyrrhic victory? *Harvard Educational Review, 58,* (1), 54-84.

Fosnacht, K., Sarraf, S., Howe, E., & Peck, L.K. (2017). How important are response rates for college surveys? *Review of Higher Education, 40,* 245-265.

Fowler, Jr. F.J. (2002). *Survey research methods* (3rd ed.). SAGE Publications.

Fowler, Jr., F.J (2009). *Survey research methods* (4th ed.). Thousand Oaks, CA: SAGE Publications.

Fowler, Jr., F.J. (2014). *Survey research methods* (5th ed.). Thousand Oaks, CA: Sage Publications.

Frankenberg, E. (2010). Exploring educators' racial attitudes in a racially transforming society. *Education and Urban Society, 44,* 448-476.

Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice.* New York, NY: Educators College Press.

Gay, G. (2002). Preparing for culturally responsive teaching. *Journal of Teacher Education, 53*(2), 106-116.

Gay, G. (2010). *Culturally responsive teaching: Theory, research, and practice* (2nd ed.). New York, NY: Educators College Press.

Gay, G. (2015). The what, why, and how of culturally responsive teaching: International mandates, challenges, and opportunities. *Multicultural Education Review, 7,* 123-129.

Give-a-Note Foundation. (2017). *The status of music education in United States public schools.* Retrieved October 19, 2020 from https://www.giveanote.org/media/2017/09/The-Status-of-Music-Education-in-US-Public-Schools-2017_reduced.pdf

Gordon, S.P., & Espinoza, S. (2020). Instructional supervision for culturally responsive teaching. *Educational Considerations, 45*(3), 1-22.

Grant, C.A., & Millar, S. (1992). Research and multicultural education: Barriers, needs, and boundaries. In C.A. Grant (Ed.), *Research and multicultural education: From the margins to the mainstream* (pp. 6-17). Falmer Press.

Hamm, J.V., & Coleman, H.L.K. (2001). African American and White adolescents' strategies for managing cultural diversity in predominantly White high schools. *Journal of Youth and Adolescence, 3,* 281-303.

Hargreaves, A. (2005). Educational change takes ages: Life, career and generational factors in educators' emotional responses to educational change. *Teaching and Teacher Education, 21,* 967-983.

Hertzog, M.A. (2008). Considerations in determining sample size for pilot studies. *Research in Nursing & Health, 31,* 180-191.

Hopkins, M.T. (2013). Educators' practices and beliefs regarding teaching tuning in elementary and middle school group string classes. *Journal of Research in Music Education, 61,* 97-114.

Hopper, T. (2000). PE educators teach the way they were taught: Asset or handicap? *Canadian Association for Health, Physical Education, Recreation and Dance, 63*(1), 47.

Ingersoll, R. (2015). Section III: What do the national data tell us about minority teacher shortages? In L. Casey, M. Di Carlo, B. Bond, & E. Quintero (Eds.), *The state of teacher diversity in American education* (pp. 14-22). Albert Shanker Institute.

Iverson, G.R., & Norpoth, H. (1987). *Analysis of variance.* Sage Publications, Inc. DOI: 10.4135/9781412983327

Johanson, G.A., & Brooks, G.P. (2010). Initial scale development: Sample size for pilot studies. *Educational and Psychological Measurement, 70,* 394-400.

Kelly-McHale, J. (2013). The influence of music teacher beliefs and practices on the expression of musical identity in an elementary general music classroom. *Journal of Research in Music Education, 61,* 195-216.

Kindall-Smith, M., McKoy, C.L., & Mills, S.W. (2011). Challenging exclusionary paradigms in the traditional musical canon: Implications for music education practice. *International Journal of Music Education, 29,* 374-386.

Kos Jr., R.P. (2018). Policy and the K-12 music teacher: A literature review. *Update: Applications of Research in Music Education, 37*(1), 20-29.

Kraska-Miller, M. (2014). *Nonparametric statistics for social and behavioral sciences.* Chapman and Hall.

Ladson-Billings, G. (1992). Culturally relevant teaching: The key to making multicultural education work. In *Research & Multicultural Education* (Grant, ed.). Bristol, PA: The Falmer Press.

Ladson-Billings, G. (1995a). Toward a theory of culturally relevant pedagogy. *American Education Research Journal, 32,* 465-491.

Ladson-Billings, G. (1995b). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into Practice, 34,* 159-165.

Lambeth, D.T., & Smith, A.M. (2016). Pre-service educators' perceptions of culturally responsive teacher preparation. *The Journal of Negro Education, 85,* 46-58.

Lampe, P.E. (1976). Assimilation and the school system. *Sociological Analysis, 37,* 228-242.

Larson, K.E., & Bradshaw, C.P., & Rosenberg, M.S., & Day-Vines, N.L. (2018). Examining how proactive management and culturally responsive teaching relate to student behavior: Implications for measurement and practice. *School Psychology Review, 47,* 153-166.

Lentin, A., & Titley, G. (2011). *The crises of multiculturalism: Racism in a neoliberal age.* Zed Books.

Lind, V.R., & McKoy, C.L. (2016). *Culturally responsive teaching in music education: From understanding to application.* New York, NY: Routledge.

Litwin, M.S. (1995). *How to measure survey reliability and validity.* Thousand Oaks, CA: SAGE Publications.

Lomax, R.G. (1998). *Statistical concepts: A second course for education and the behavioral sciences.* L. Erlbaum Associates.

Mantie, R. (2012). Band and/as music education: Antimonies and the struggle for legitimacy. *Philosophy of Music Education Review, 20,* 63-81.

Marginalized. (2021). In *Merriam-Webster.* Retrieved from https://www.merriam-webster.com/dictionary/marginalized

Marrett, C.B., Mizuno, Y., & Collins, G. (1992). Schools and opportunities for multicultural contact. In C.A. Grant (Ed.), *Research and multicultural education: From the margins to the mainstream* (pp. 200-213). Falmer Press.

Martinez, M.J. (2018). Does school racial composition matter to educators: Examining racial differences in educators' perceptions of student problems. *Urban Education, 55,* 992-1020.

Massey, D.S., & Tourangeau, R. (2013). Where do we go from here? Nonresponse and social measurement. *The ANNALS of the American Academy of Political and Social Science, 645*(1), 222-236.

McBurney, D.H. (2001). *Research methods* (5th ed.). Wadsworth.

McClellan, E.R. (2002). Multicultural teacher education: Methodology for the future instrumental music teacher. *Contributions to Music Education, 29*(2), 85-102.

McKoy, C.L. (2013). Effects of selected demographic variables on music student educators' self-reported cross-cultural competence. *Journal of Research in Music Education, 60,* 375-394.

McKoy, C.L., Macleod, R.B., Walter, J.S., & Nolker, D.B. (2017). The impact of an in-service workshop on cooperating educators' perceptions of culturally responsive teaching. *Journal of Music Teacher Education, 26*(2), 50-63.

McKnight, P.E., & Najab, J. (2010). Mann-Whitney U Test. In I.B. Weiner & W.E. Craighead (eds.), *The Corsini encyclopedia of psychology* (4th ed.). Wiley Ebooks Online.
DOI: https://doi-org.libproxy.uncg.edu/10.1002/9780470479216.corpsy0524

Mellom, P.J., Straubhaar, R., Balderas, C., Ariail, M., & Portes, P.R. (2018). "They come with nothing:" How professional development in a culturally responsive pedagogy shapes teacher attitudes towards Latino/a English language learners. *Teaching and Teacher Education, 71*, 98-107.

Merriam-Webster. (n.d.). Consistently. In *Merriam-Webster.com dictionary.* Retrieved September 26, 2020, from https://www.merriam-webster.com/dictionary/consistently

Miksa, P., Roeder, M., & Biggs, D. (2010). Surveying Colorado band directors' opinions of skills and characteristics important to successful music teaching. *Journal of Research in Music Education, 57,* 364-381.

Mixon, K. (2009). Engaging and educating students with culturally responsive performing ensembles. *Music Educators Journal, 95*(4), 66-71.

Nardi, P.M. (2006). *Doing survey research: A guide to quantitative methods* (2nd ed.). Boston, MA: Pearson Education.

National Center for Education Statistics. (n.d.). *Fast facts: Educational statistics.* Retrieved October 19, 2020, from https://nces.ed.gov/fastfacts/display.asp?id=84

National Center for Education Statistics. (n.d.). *Characteristics of public school educators.*
Retrieved March 5, 2021, from https://nces.ed.gov/programs/coe/indicator_clr.asp

Neely, L.P. (2001). Developmentally appropriate music practice: Children learn what they live. *Young Children 56*(3), 32-37.

Nulty, D.D. (2008). The adequacy of response rates to online and paper surveys: What can be done? *Assessment & Evaluation in Higher Education, 33,* 301-314. DOI: 10.1080/02602930701293231

Oleson, A. & Hora, M.T. (2014). Teaching the way we were taught? Revisiting the sources of teaching knowledge and the role of prior experience in shaping faculty teaching practices. *Higher Education, 68,* 29-45.

Orosco, M.J., & O'Connor, R. (2014). Culturally responsive instruction for English language learners with learning disabilities. *Journal of Learning Disabilities, 47,* 515-531.

Plichta, S.B., & Garzon, L.S. (2009). *Statistics for nursing and allied health.* Wolters Kluwer/Lippincott Williams & Wilkins Health.

Punch, K.F. (2003). Survey research: The basics. Sage Publications Ltd.

Ramsey, P., Williams, L.R., & Vold. E. (2002). *Multicultural education: A source book* (2nd ed.). New York, NY: Routledge Falmer.

Rhodes, C.M. (2013). A study of culturally responsive teaching practices of adult ESOL and EAP educators. *Journal of Research and Practice for Adult Literacy, Secondary, an Basic Education, 2,* 170-183.

Rhodes, C.M. (2017). A validation study of the Culturally Responsive Teaching Survey. *Universal Journal of Educational Research, 5,* 45-53.

Rietveld, T., & van Hout, R. (1993). *Statistical techniques for the study of language and language behavior.* De Gruyter, Inc.

Rietveld, T., & van Hout R. (2005). *Statistics in language research: Analysis of variance.* De Gruyter, Inc.

Runfalo, M., Etopio, E., Hamlen, K., & Rozendal, M. (2012). Effect of music instruction on preschoolers' music achievement and emergent literacy movement. *Bulletin of the Council for Research in Music Education, 192,* 7-27.

Russell, J.A. (2006). Building curriculum-based concerts. *Music Educators Journal, 92*(3), 34-39.

Rychly, L., & Graves, E. (2012). Teacher characteristics for culturally responsive pedagogy. *Multicultural Perspectives, 14,* 44-49.

Saleh, A., & Bista, K. (2017). Examining factors impacting online survey response rates in educational research: Perceptions of graduate students. *Journal of Multidisciplinary Evaluation, 13,* 63-74.

Salvador, K., & Kelly-McHale, J. (2017). Music teacher perspectives on social justice. *Journal of Research in Music Education, 65,* 6-24.

Sapsford, R. (2007). *Survey research.* SAGE Publications.

Schein, E.H. (1999). *The corporate culture survival guide.* San Francisco, CA: Jossey-Boss, Inc.

Schmidt, M. & Smith, M. (2017). Creating culturally responsive ensemble instruction: A beginning music educator's story. *Bulletin of the Council for Research in Music Education,* no. 210-211, 61-79.

Sealey-Ruiz, Y. (2007). Wrapping the curriculum around their lives: Using a culturally relevant curriculum with African American adult women. *Adult Education Quarterly, 58,* 44-60.

Shaw, J.T. (2016). "The music I was meant to sing": Adolescent choral students' perceptions of culturally responsive pedagogy. *Journal of Research in Music Education, 64,* 45-70.

Sheehan, P.S. (2002). Music education in a time of cultural transformation. *Music Educators Journal, 89*(1), 27-32, 54.

Sheldon, D.A., & Hartley, L.A. (2012). What color is your baton, girl? Gender and ethnicity in band conducting. *Bulletin of the Council for Research in Music Education. 192,* 39-52.

Siwatu, K.O. (2009). Student educators' self-efficacy beliefs regarding culturally responsive teaching and their professed classroom practices. *Teacher Education and Practice, 22,* 323-333.

Strand, K. (2006). Survey of Indiana music educators on using composition in the classroom. *Journal of Research in Music Education, 54,* 154-167.

Stevens, S.S. (1946). On the theory of scales of measurement. *Science, 103,* 677-680.

Thibeault, M.D. (2013). Quite a lot on some problems with-and just a little on the hopes for-secondary general music with regards to culturally responsive and respectful music education. *General Music Today, 26*(3), 35-38.

Tourangeau, R., Conrad, F.G., & Couper, M. (2013). *The science of web surveys*. Oxford University Press.

Ursachi, G., Horodnic, I.A., & Zait, A. (2015). How reliable are measurement scales? External factors with indirect influence on reliability estimators. *Procedia Economics and Finance, 20,* 679-686.

Vehovar, V., Batagelj, Z., Manfreda, K.L., & Zaletel, M. (2002). Nonresponse in web surveys. In R.M. Groves, D.A. Dillman, J.L. Eltinge, & R.J.A. Little (Eds.), *Survey Nonresponse* (pp. 229-242). John Wiley & Sons, Inc.

Verma, J.P., & Abdel-Salam, A.G. (2019). *Testing statistical assumptions in research.* John Wiley & Sons, Inc.

Villegas, A.M., & Lucas, T. (2002). *Educating culturally responsive educators.* Albany, NY: State University of New York Press.

Vogt, L., Jordan, C., & Tharp, R. (1987). Explaining school failure, producing school success: Two cases. *Anthropology and Education Quarterly, 18,* 276-286.

Vogt, W.P. & Johnson, R.B. (2011). *Dictionary of statistics & methodology: A nontechnical guide for the social sciences.* SAGE Publications, Inc.

Volk, T. (1991). Attitudes of instrumental music educators toward multicultural music in the instrumental program. *Contributions to Music Education, 18,* 48-56.

Walter, J.S. (2018). Global perspectives: Making the shift from multiculturalism to culturally responsive teaching. *General Music Today, 31*(2), 24-28.

Weiss, D. (2005). *Analysis of variance and functional measurement: A practical guide.* Oxford University Press.

Welkowitz, J., Cohen, B.H., Lea, R.B., (2011). *Introductory Statistics for the Behavioral Sciences* (7th ed.). John Wiley & Sons, Inc.

Whitaker, M.C., & Valtierra, K.M. (2018). The dispositions for Culturally Responsive Teaching Scale. *Journal for Multicultural Education, 12,* 10-24.

Yap, B.W., & Sim, C.H. (2011). Comparisons of various types of normality tests. *Journal of Statistical Computation and Simulation, 81,* 2141-2155. http://dx.doi.org/10.1080/00949655.2010.520163

Yan, T., & Curtin, R. (2010). The relation between unit nonresponse and item nonresponse: A response continuum perspective. *International Journal of Public Opinion Research, 22,* 535-551. https://doi.org/10.1093/ijpor/ed1037

Zimmerman, D. (2011). A simple and effective decision rule for choosing a significance test to protect against non-normality. *British Journal of Mathematical and Statistical Psychology, 64,* 388-409.

APPENDIX A

SURVEY OF CULTURALLY RESPONSIVE TEACHING

1. In what region of the country did you primarily grow up?

    - South Atlantic (Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia)
    - East South Central (Alabama, Kentucky, Mississippi, Tennessee)
    - West South Central (Arkansas, Louisiana, Oklahoma, Texas)
    - Middle Atlantic (Connecticut, New Jersey, New York, Pennsylvania)
    - New England (Maine, Massachusetts, New Hampshire, Rhode Island, Vermont)
    - East North Central
    - West North Central (Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota)
    -
    - Mountain (Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming)
    - Pacific (Alaska, California, Hawaii, Oregon, Washington State)
    - I grew up outside the U.S. (please name the country) _____

2. What is your primary area of concentration?

    - Middle School Band
    - Middle School Orchestra
    - High School Band
    - High School Orchestra

3. I provide rubrics and progress reports to students.

    - Never
    - Rarely
    - Sometimes
    - Usually
    - Always

4. I make an effort to get to know students' families and backgrounds.

    - Never
    - Rarely
    - Sometimes
    - Usually
    - Always

5. I examine musical selections for culturally accurate melodies and themes.

    - Never
    - Rarely
    - Sometimes
    - Usually
    - Always

6. I spend time outside of class learning about the cultures and languages of my students.

    - Never
    - Rarely
    - Sometimes
    - Usually
    - Always

7. I learn words in students' native languages where appropriate.

    - Never
    - Rarely
    - Sometimes
    - Usually
    - Always

8. I ask for student input when planning lessons and activities.

    - Never
    - Rarely
    - Sometimes
    - Usually
    - Always

9. I examine musical selections for cultural accuracy with regard to variables such as instrumentation, melodic/harmonic/rhythmic elements, timbre, and form.

    - Never
    - Rarely
    - Sometimes
    - Usually
    - Always

10. I tailor music instruction to the needs of all my students.

    - Never
    - Rarely
    - Sometimes
    - Usually
    - Always

11. Instructing students in the music of different racial/ethnic groups and cultures is important in my classes.

    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

12. I know what multicultural education means.

    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

13. I know what culturally responsive teaching means.

    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

14. I understand culturally responsive teaching, but I don't know how to incorporate it in my own teaching.

    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

15. I am unsure of the cultural qualities of social groups other than my own.

    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

16. I can explain how culture influences students' learning of musical content.

    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

17. I understand how factors related to culture, race, and ethnicity may impact the music teaching process.

    - Strongly disagree
    - Disagree
    - Neutral
    - Agree
    - Strongly Agree

APPENDIX B

PAIRWISE COMPARISONS OF GEOGRAPHIC LOCATION FOR SCRT ITEM 12

Geographic Location	Sig.	Adj. Sig.[a]
ESC-NE	.536	1.000
ESC-M	.189	1.000
ESC-WNC	.199	1.000
ESC-MA	.053	1.000
ESC-ENC	.029	1.000
ESC-SA	.016	.564
ESC-WSC	.021	.758
ESC-P	.008	.281
NE-M	.473	1.000
NE-WNC	.484	1.000
NE-MA	.144	1.000
NE-ENC	.078	1.000
NE-SA	.042	1.000
NE-WSC	.055	1.000
NE-P	.021	.744
M-WNC	.987	1.000
M-MA	.314	1.000
M-ENC	.160	1.000
M-SA	.076	1.000
M-WSC	.111	1.000
M-P	.036	1.000
WNC-MA	.355	1.000
WNC-ENC	.191	1.000
WNC-SA	.104	1.000
WNC-WSC	.129	1.000
WNC-P	.049	1.000
MA-ENC	.647	1.000
MA-SA	.496	1.000
MA-WSC	.409	1.000
MA-P	.238	1.000
ENC-SA	.881	1.000
ENC-WSC	.665	1.000
ENC-P	.483	1.000
SA-WSC	.730	1.000
SA-P	.528	1.000
WSC-P	.865	1.000

a. Significance values have been adjusted by the Bonferroni correction for multiple tests.

Geographic Region Legend:

ESC – East South Central	P - Pacific	M - Mountain
WSC – West South Central	WNC – West North Central	MA – Mid Atlantic
NE – New England	ENC – East North Central	SA – South Atlantic